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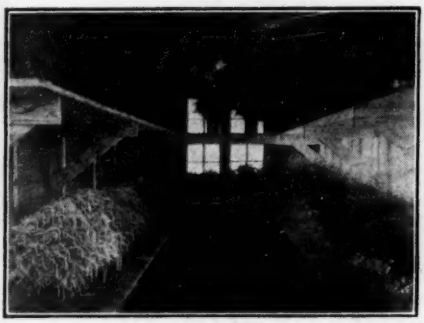

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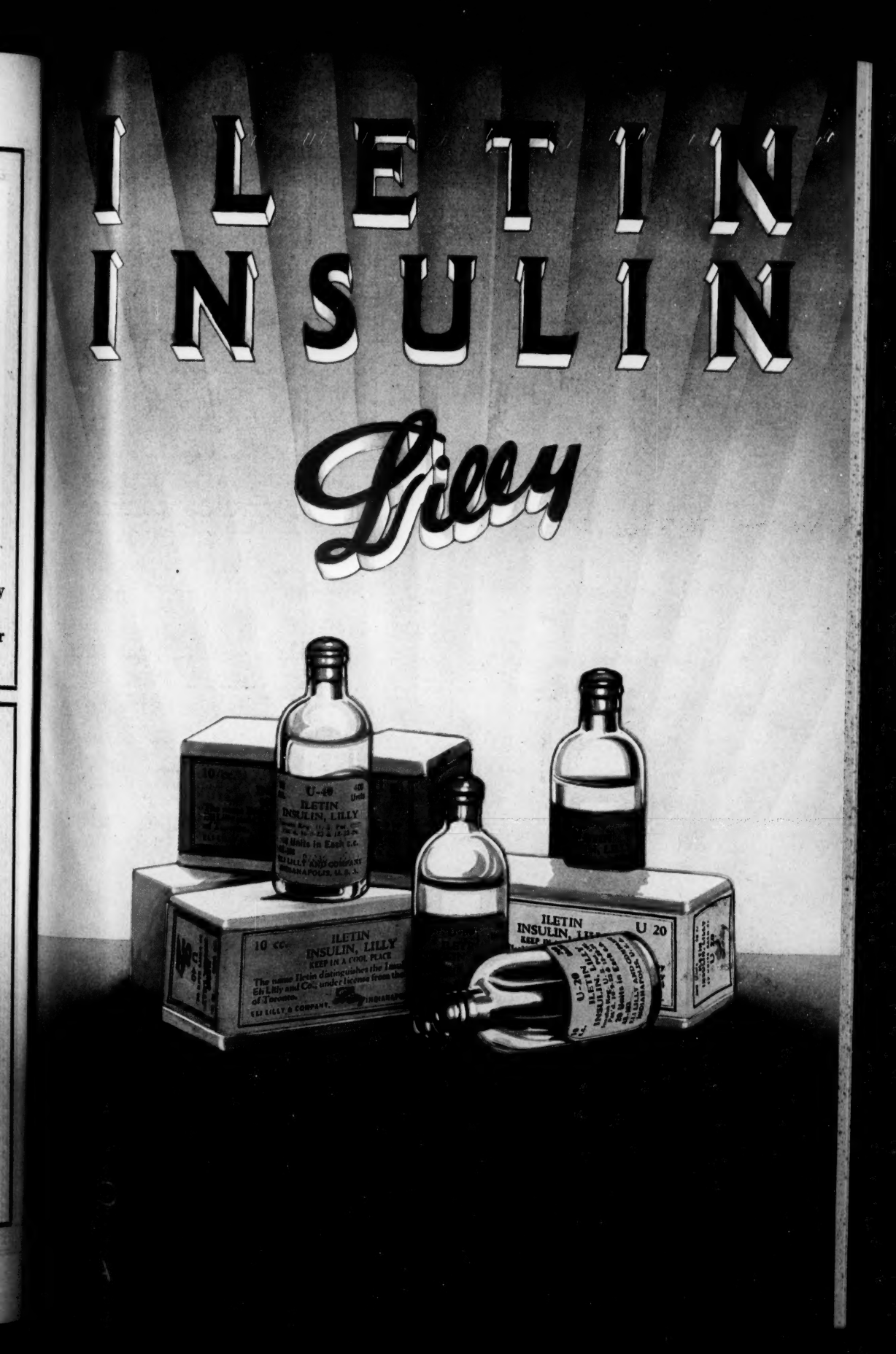
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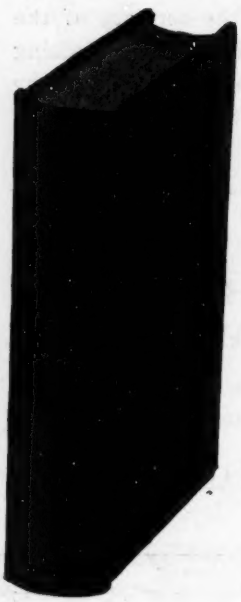

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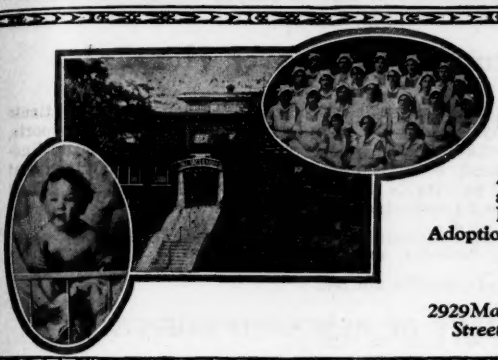

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Respectfully, Name.....

P. O.....

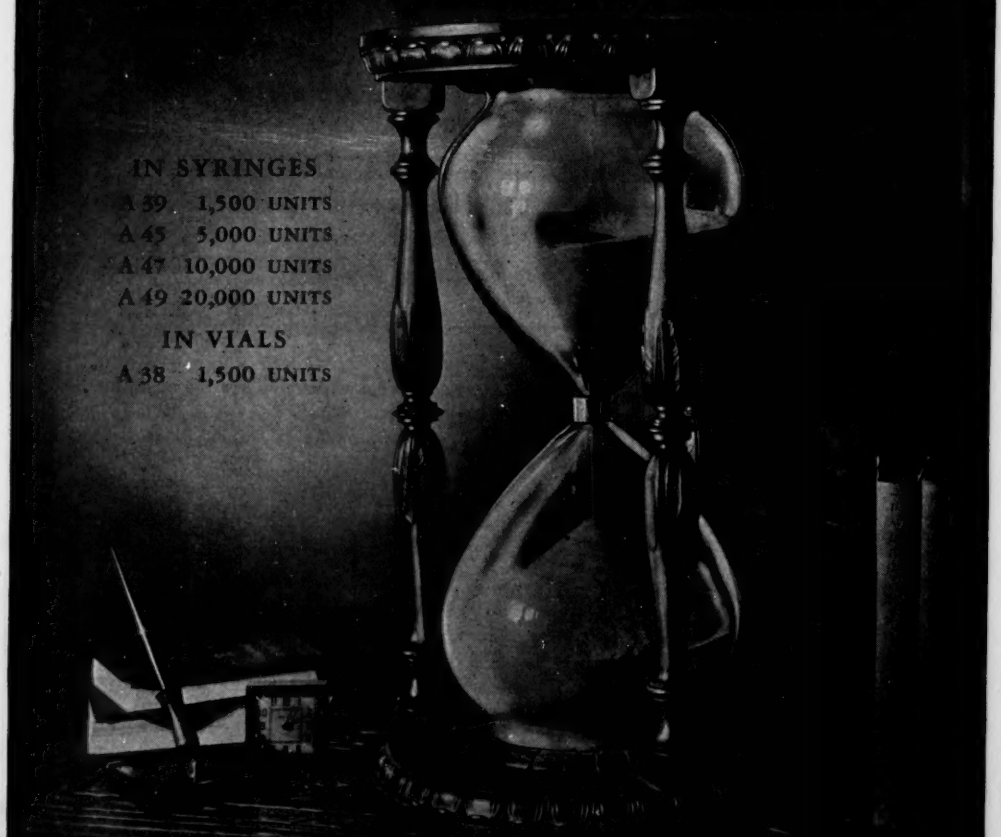
County.....

State .....

NOTE.—The above information is primarily for use in the Card Index System of the County and State and for the American Medical Directory.

'Ware Time . . . The Cheater!

Every hour is precious and likely to be costly to the patient in need of tetanus antitoxin. Tetanus Antitoxin, Lilly, commends itself to your attention for its potency, its concentration, its comparative freedom from reaction-producing proteins, its low total solids, its clarity and limpidity, and for its ready availability in all sections of the country through the drug trade.



IN SYRINGES
A 39 1,500 UNITS
A 45 5,000 UNITS
A 47 10,000 UNITS
A 49 20,000 UNITS

IN VIALS
A 38 1,500 UNITS

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The Treatment of Fractures

JOHN R. NILSSON, M.D., Omaha, Neb.

Read before the annual meeting of the Kansas Medical Society, at Topeka, Kan., May 7, 8 and 9, 1930.

Six years ago Dr. Darrow, of Columbia University; Dr. Joseph Blake, of New York City, and Dr. Scudder, of Boston, appeared before the Regents of the American College of Surgeons and stated that from their observation and knowledge of the treatment of fractures, as generally practiced throughout the country, there was a great opportunity to improve methods of transportation and treatment of fracture cases, which would bring about better end results. The Regents, acting upon their suggestion, appointed a Fracture Committee, of which Dr. Scudder was made the Chairman, to thoroughly investigate the fracture situation and report. After a six year survey their report has been completed, and soon a "Fracture Primer" will be published in the official organ of the College. This will deal with the best methods of transportation and will give general principles for the treatment of fracture cases.

I am sure that this will prove a valuable guide to the general practitioner and the young surgeon who handles fracture cases. One who is in general practice does not have the opportunity to realize the importance of the proper treatment of fractures as one would who is connected with an industrial institution. When I tell you that the railroad companies of the United States paid out in 1928 the sum of $20,000,000 for fracure cases alone, it will give you some idea of what these fracture cases really mean to the railroad companies of the United States annually.

I feel confident that this is one of the branches of surgery that needs improvement. Cases are coming to us, three to five months after injury with bad end results where no *x*-rays have been taken during the course of treatment. I cannot see why a doctor will treat a severe injury case without an *x*-ray, when same is available in his own town.

A few months ago I was asked to see a woman in a hospital in Wyoming, who gave the following history:

She had fallen on the dance floor, injuring right knee. Her physician treated her for a sprain. After two weeks of severe suffering her husband insisted on an *x*-ray being taken. This disclosed a fracture of the distal end of the femur three inches above the knee. Her leg was four inches short. She was removed to the hospital where, in spite of treatment properly administered, she finally died as a result of this severe fracture.

Five months ago a young man was referred to me who, four months previously, had fallen from a wagon injuring left ankle. Same was placed in a plaster cast at the time of injury, and remained in the cast for five weeks—no *x*-rays taken. Cast was removed, leg swollen and after three months he was still unable to step on his foot. He changed doctors and his second doctor brought him to the hospital. On inspection his foot and ankle were swollen and a deformity was evident. *x*-Ray showed fracture of distal end of fibula healed in mal-position. Tibia dislocated forward on the astragalus. A reduction was attempted under an anesthetic, but this could not be accomplished. An open operation was necessary with a tenotomy of the tendo-achilles.

A third case. Simultaneous fracture of head and shaft of right humerus, with radial nerve paralysis, healed in mal-position. Patient had already undergone two operations at one of our large clinics, but they have not been a success and he is still disabled.

In one hundred cases of fractures of shaft of the femur, collected by Dr. Scudder, of Boston, where no *x*-rays had been

taken, not a single one of these was able to return to duty at his old position two years following the accident.

In a hundred cases treated by Dr. Sherman, of Pittsburgh, by the open method and plating, 95 per cent had a 100 per cent functional result and were well six and a half months after injury.

There are approximately eight hundred thousand fractures annually in the United States.

TREATMENT AVAILABLE—SEVERAL METHODS

1. Closed method—General anesthesia, splints, plaster Paris, and early motion.
2. Reduction by aid of local anesthesia (1 per cent novocaine.)
3. Skin traction—suspension and extension.
4. Mobilization—massage (Dr. Delbit method—Paris).
5. Skeletal traction by means of Ranshoff's Tongs—Steinman pins.
6. Open method, Lane plate, Parham band.

TREATMENT OF SEVERE INFECTED FRACTURES BY SUSPENSION AND EXTENSION

Quoting from Dr. Joseph Blake: "During the early part of the war ordinary splints and plaster Paris were used. Many cases of edema, rapid atrophy of muscles, severe hidden infections, ankylosed joints and gas gangrene were the result, and many extremities were left in a hopeless, deplorable condition. Our colleagues, the English and French, soon saw the necessity of discarding the splints and plaster Paris and resurrecting the old Balkan frame, Thomas, Hodgins and Murray splints, and placing extremities in suspension and extension. The great advantages of this form of treatment became at once apparent. The circulation in the limbs was better, the wounds were accessible, union more rapid, and the best of all, the patients had no pain. Articulations were seldom fixed and muscles were always accessible for massage."

In our hospital in Paris we had many Balkan frames, splints used were Thomas, Hodgins and Murray. All extremities were placed in suspension and extension after debridement had been performed. In badly infected cases Carrel-Dakin tubes were used and various solutions, such as Dakin's made from chlorin gas, A B C solution (phenol 1 per cent, alcohol 10 per cent, boric acid saturated solution), the free drainage antiseptic solutions. Extension and suspension saved most of our extremities. During my service in the A.R. M.H. No. 3, in Paris, we lost only three cases out of the several hundred treated, and that was due to secondary hemorrhage. As soon as all infection had subsided massage was begun by a trained nurse.

METHOD OF ATTACHING TRACTION APPARATUS

When ZO was not available we used Sinclair's glue, consisting of the following:

Glue 50 parts,
H_2O 50 parts.
Glycerin 2 parts,
Calcium chloride, 1 part,
Thymol, 1 part.
to be applied warm.

TRACTION

Object is to overcome longitudinal deformity, that is overlapping and angulation pull should be in axis of proximal fragment, and fixation of joints is disregarded. Amount should be sufficient to reduce fracture in the first twenty-four hours, then reduce weights.

RADIOGRAPHIC CONTROL

x-Ray frequently when using traction and extension method.

SUMMARY

1. All fractures should be treated as emergencies, and by the closed method whenever possible. I believe in, and practice, reducing fractures at once. I never wait three or four days for the swelling to subside as is taught by some surgeons. The report of the English investigation committee on the fracture situation in England states that the delay in setting fractures is responsible for faulty reductions more often than any other factor, and, therefore, is often the cause of an operation.
2. Minor surgical procedures should be tried in difficult cases such as Steinman pins, and Ranshoff's tongs.
3. If reduction is impossible by minor methods, open operation should be performed, and in my work I have been using the Lane plate, Parham bands,

ordinary screws, and aluminum bronze wire.

The British Medical Association appointed a committee about four years ago to investigate relative results in fractures, open and closed methods. Their conclusions were as follows:

1. Non-operative in children 90.5 per cent good functional results. Operative in children 93.6 per cent.
2. Progressive depreciation of functional results from non-operative as age advances.
3. Operative give higher percentage of good results at all ages.
4. Best way to get a good functional result is to secure a good anatomic result.
5. A method that does not definitely promise a good anatomic result should not be chosen.
6. Best results operate early, not after failure of non-operative method.
7. Operative treatment requires skill and expense.
8. Mortality rate practically nil.

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The Treatment and Management of Tetanus

L. W. SHANNON, M.D., Hiawatha

Read before the annual meeting of the Kansas Medical Society, at Topeka, Kan., May 7, 8 and 9, 1930.

"Tetanus is a disease caused by an infection with the *Bacillus tetani*, and characterized clinically by a toxemia in which the central nervous system is attacked, producing tonic spasm of the muscles."

In discussing this subject I want to base my remarks upon my observation of a number of cases and especially upon one case.

It might seem that with the well-established use of antitetanic serum in the treatment of tetanus a thesis with no *new* factors for the relief of this dreaded disease would be an imposition. However, with an experience of thirty-seven cases covering a period of nineteen years—seventeen of which were seen during an internship—all of which, except one, went the chloroform route, there would at least seem to be grounds for improvement in the management and technique with such factors as we now possess, even though no new remedy was to be offered. Therefore, when I was called to see a case that had the well developed lockjaw and general muscular rigidity even to opisthotonos, resulting from a nail wound in the foot eight days before, I realized that nothing short of heroic efforts would be worthy of consideration. As I had an intimation before leaving the office of what I might encounter, I armed myself with all the antitoxin available, ten thousand units, and at once administered the full amount intravenously and would have given three times the amount if I had had it.

Before we enter into a discussion of the case in hand, let me review a few of the well-established facts concerning tetanus.

Regarding the etiology of tetanus, I shall enter into no elaborate discussion more than to emphasize the fact that the tetanus germ thrives only in closed wounds. That is they are anaerobic. And that punctured wounds are the wounds that are most susceptible to tetanic infection, however, I have seen two cases of tetanus develop with open wounds. I remember distinctly one case of a man that had his hand crushed in the cogs of an ice cream freezer producing an open and mangled wound, and which was not closed as there were no free edges to approximate and yet the man developed tetanus. Therefore in the etiology of this disease I would include not only punctured wounds but mangled wounds. It is also well to keep in mind that the specific germ of this disease is a spore bearing bacillus, which may reproduce after eight or ten days after ordinary sterilization. However, aside from the specific origin of this disease I think there are other factors aside from the germ and nature of the wound that should claim our attention and careful consideration, because I feel that they are the basic principles upon which the successful issue in the treatment and management of these cases depend. It is a well established fact that the clinical manifestations of tetanus are due to a toxin produced by the germ at the site of the wound, and manifested clinically by sufficient irritation of the central nervous

system to produce spasms. Therefore in order that we may the more intelligently engage in the treatment and management of the person suffering from a well developed case of tetanus, let us consider, not only the origin of the toxin, but the following points:

First: From the port of entry, how does the toxin find its way to the nerve centers, and how long does it require to make the journey?

Second: When does the antitoxin neutralize the toxin and with what rapidity does it reach this point after being administered?

Third: What portion of the antitoxin administered reaches the part of the body where the toxins do their deadly work?

Fourth: Is it possible to anticipate the amount of toxin produced in the wound?

Fifth: How is it best to control spasm and hypersensitiveness.

The greatest portion of the toxins produced are found in the blood and find their way to the central nervous system by way of the motor-nerve tracts, either by way of the axis cylinders or the lymphatics of the nerves. At the present time it has been shown, and the theory prevails, that there might be circulating in the blood of a person infected with tetanus many times the fatal dose, if not many thousand times the fatal dose, with no fatal issue until the fatal dose or amount of toxin has reached the nerves and ganglia of the central nervous system. Ramson (page 400 Hare) has demonstrated, by intravenous injection of antitoxin, it is possible to neutralize the toxin in the blood in a very few minutes, almost as rapidly as in a test tube experiment. Therefore, the real conflict lies in neutralizing the toxin after it has left the blood through the capillaries, while it is in migration through the fine interstices of the connective tissue through which it must penetrate before reaching the nerves. And that there is an interval between the time that the blood becomes supersaturated with toxin and the time that the fatal issue may occur, has been demonstrated by injecting thirty thousand fatal doses into an animal which survived twelve hours; ten fatal doses and the period was twenty-four to thirty-six hours and when only two fatal doses were administered, the time was two or three days. And that the first warning we may have of there being a case of tetanus, such as reflex excitability and muscular rigidity may and does occur long before the fatal dose has passed beyond the reach of antitoxin, has been demonstrated by such cases recovering. Therefore, the interval between the time we have our first suggestion of tetanus and the time necessary to absorb a fatal dose is our opportunity for heroic work. Now it has been shown that antitoxin administered subcutaneously is absorbed very slowly —twelve to twenty-four hours before the maximum amount finds its way into the circulation. Therefore, the subcutaneous method is mentioned only to condemn it, because of this very slow absorption from the tissues it will, in most all cases, jeopardize the life of the patient. In administering prophylactic doses and in the later stages of the disease the subcutaneous method may be used but never relied upon in the active treatment of a well developed case. The intradural administration of the serum has the advantage of the intravenous route only to the extent of neutralizing the toxins free in the cerebro spinal fluid quickly, but since the toxin exerts its deadly influence upon the centers of the central nervous system, simply neutralizing the toxin in the cerebro-spinal fluid would not give us the desired effect until the antitoxin would be absorbed, and since the absorption from the cerebro-spinal fluid is slow as compared to other routes, a reliance upon the intraspinal method alone is condemned. When injected intravenously a portion of the antitoxin passes very rapidly into the lymph, having been found in the thoracic duct of a dog two minutes after being administered. But that it reaches the cerebro-spinal fluid slowly is proven by the fact that the fluid never contains more than 2 per cent of the amount of the antitoxin in the blood. Therefore, with this comparatively fixed result existing between the amount in the blood and that found in the cerebro-spinal fluid, we are surely justified in conclud-

ing that the amount of toxin in the tissues between the capillaries and the lymphs and axis cylinders of the nerves is the same graduated and fixed proportions or, in other words, the more antitoxin units that are in the blood the more will find their way into the tissues and is in direct proportion to the amount given. Bearing in mind all these facts, it is quite evident that a successful issue depends upon supersaturating the blood by intravenous injections of the large doses of antitoxin until there are signs of improvement. An intraneural injection of the antitoxin would place the remedy in more direct contact with the nerves, but I doubt if as potent as by the circulation, from the fact that absorption from the nerve sheath would be very slow and practically nil; and there would not be the advantage of neutralizing the toxin in the tissues on the way to the nerve cells.

Hare and Field performed a series of experiments on forty guinea pigs to test out the importance of small and large doses given either by intravenous or intraneural method and the experiments showed that moderate doses of antitoxin given after the development of tetanus does not save the animals from death or even prolong life, while very large doses could do both and they also state that if very large doses are given intravenously that the intraneural injections are not necessary.

In the experimental work with tetanus and tetanus antitoxin where it is possible to first determine the fatal dose of toxin to a certain animal and also to determine experimentally the amount of antitoxin necessary to counteract it, the experiments of Hare and Field are of great value in demonstrating to us that it is absolutely necessary to introduce into the system a sufficient amount of the antitoxin to neutralize the toxins being developed in the body, and since it is impossible for us to have any idea of the amount of toxin being produced in a case in hand, it remains for us to be guided by our better judgment and close observation of the case, and, if we should err at all, let us err upon the side of giving an excessive rather than an insufficient amount, for it seems to be quite evident that there can be more ill effects following such a course.

Therefore, when this case came under my observation, I began to administer the antitoxin intravenously, giving all I had, ten thousand units, at the first visit and at the rate of thirty thousand units every twenty-four hours at eight hour periods for the next four days, and then five thousand units a day for the next four days, giving in all one hundred and forty-six thousand units.

The accessory management and treatment, although not of a specific nature, I consider of much importance with a well-developed case of tetanus on hand; a person has many angles of defense to watch, and the convulsions are to be controlled with as little detriment to the patient as possible. Morphine, chloroform and bromides and chloral have long been the sheet anchors for this purpose. I think they should be used for quick relief if necessary, but not abused. In my observation of this case, I found that rigidity of the muscles and even convulsions could be lessened and controlled by keeping the patient under the control of a saturated solution of magnesium-sulphate administered hypodermically. I began with 1 cc doses every two hours and gradually increased until I gave 16 cc every two hours with ⅛ gr. morphine added to every other dose, all the time watching for signs of depression. I discontinued the use of morphine with any regularity after four days, but continued the use of saline solution, gradually decreasing the frequency. I found upon repeated efforts to discontinue it entirely that the hypersensitiveness would increase, and just as soon as a dose or two was administered the patient was quiet. The administration of bromide and chloral after the first six or eight days would quiet the patient while under the influence and asleep, but as soon as the patient was awake there was the same hypersensitiveness. I then gave the saline alone and found the patient would be quiet although not asleep, and resting well as long as saturated with the magnesium-sulphate solution. Therefore, it was continued up to the third

week, giving only as required; the last few days only three or four doses in twenty-four hours. In the first ten days, or in the active stage of the disease, I found that a combination of saline in the day time and bromide and chloral at night gave very happy results, as nocturnal rest was afforded, and in the day time the patient was awake to co-operate in her care and management.

Therefore, I might sum up my observations as follows: Since toxin is neutralized by the antitoxin to the best advantage before it reaches the nerve cells and ganglia, and since we can administer antitoxin in a way that it will be absorbed and disseminated much more rapidly than toxin that is being or has been absorbed from the wound, it is very important that we take advantage of the first suggestion of tetanus and begin the administration of very large doses intravenously of antitoxin sufficient to supersaturate the blood and tissues, in order to overcome the toxin, as it were, on the way to the central nervous system.

In the control of the rigidity and hypersensitiveness, I would push the use of magnesium-sulphate solution, reinforced in the early stages with morphine in small doses administered principally in the wakeful periods, and use bromides and chloral at night. I gave two doses of saline each night and continued the use of saline as long and as often as required to control the rigidity and hypersensitive condition of the patient, extending far into the convalescing period, even to the end of the third week.

And finally in considering this dreaded disease, not the least important point is prophylaxis. Every case of probable or possible tetanus infection should have a prophylactic dose of 1500 units of antitetanic serum, administered subcutaneously. If the wound is traumatic, it should be opened up, cleansed, and free drainage provided. Where there may be missiles of metal imbeded in the tissues the parts should be *x*-rayed and if any such are present, removed. Wounds of the hands by the fourth of July blank cartridges are the most deceiving to the eye of the layman. Usually there is simply an abrasion of the skin noticeable. But in practically all cases when the wound is explored there is found imbeded in the tissues the wad of the cartridge. It was this class of wounds that was the cause of the majority of the cases coming under my observation several years back. Disinfection with peroxide is very effective, if the peroxide is placed in the wound, not on the surface of the wound. The free oxygen liberated is antigenistic to the anaerobic bacillus. In the treatment of punctured wounds I find it very effective to open slightly, and pass a silk drain saturated with iodine to the bottom of the wound.

However, when we are deprived of the privilege of prophylaxis, we are called to meet the issue squarely, with a well developed case of tetanus in hand, we should remember that the seriousness of the situation demands heroic efforts, and should act accordingly. Therefore permit me to tabulate a basis of action:

First: Tetanus antitoxin administered in massive doses. First, intravenously, not less than 10,000 units and if the case has been late in developing and the symptoms are well developed, better use 20,000, with 5,000 intraspinally. And if seen very late, better the intraneural method should also be used for one dose at least. Repeating the intravenous doses in eight to twelve hours according to the severity of symptoms. Tapering off in the use of the serum by the subcutaneous method.

Second: Disinfection of the original wound. Best by free incision, disinfection and drainage, and saturation of the tissues around the wound with tetanus serum.

Third: Isolation of the patient. Not only for the benefit of the patient but for the protection of others as tetanus is a conagious disease.

Fourth: Saturated solution of magnesium sulphate administered subcutaneously. Beginning with 1 cc doses every two hours and increasing 1 cc each dose, until sufficient amount is being given to control the hypersensitiveness and convulsions. Watching the respirations, not the cyanosis. In the early stages reinforce the magnesium sulphate solution with ⅛ grain morphine in every

other dose, and bromide and chloral, especially at night. Gradually dropping off the narcotics and sedatives, but continuing the magnesium sulphate far into the convalescing period.

Fifth: Free elimination, catheterization if necessary.

Necrology Report

ELMER E. LIGGETT, M.D., Oswego
Chairman, Committee on Necrology

Read before the annual meeting of the Kansas Medical Society, at Topeka, Kan., May 7, 8 and 9, 1930.

Since our last report at the Hutchinson meeting in 1929, the Necrology Committee has obtained a list of ninety-six "doctors," who had died in Kansas. We found that fifty-three of these decedents should be reported as having spent their active professional lives in the state of Kansas.

We obtained our information about these fifty-three decedents from the Kansas and American Medical Directories, the Journals of the Kansas State and the American Medical Associations, the obituary notices in newspapers, from correspondence with the secretaries of the county societies, from other physicians in the communities in which deaths occurred, from relatives of the deceased, from postmasters, and from copies of the death certificates which the secretary of the state board of health sent us.

No delayed reports from the year 1928 are necessary this year. Of the sixty-one organized local societies, twenty-nine secretaries report no deaths, but one death did occur in one county so reporting. Twenty secretaries report twenty-seven deaths, and one other death, not reported occurred in one of these counties, a total of twenty-eight deaths. Three unorganized counties reported three deaths. Four unorganized counties did not report, but one death occurred in each county of the four. Six organized counties made no report whatever, but no deaths are known to have occurred in these counties. Thus the fifty-three deaths occurred in thirty-three counties, only thirty of which were reported by twenty-three county secretaries.

According to the 1929 edition of the American Medical Directory there are two thousand two hundred and fourteen physicians in Kansas. Thus these fifty-three deaths are equivalent to twenty-three and twenty-five hundredths per thousand. A decrease over last year of five and seventy-five hundredths per thousand. The Kansas State Board of Health reports the percentage among the people throughout the state for the year 1929 as ten and five tenths per thousand.

Of the fifty-three deaths reported, thirty-five were members of this Society, twelve were not members, and the status of six was not stated. Thirty-four of the deceased were in active practice, and nineteen were retired.

The ages of death of the fifty-three varied from twenty-seven to eighty-eight. One was under thirty years of age. Two were thirty to thirty-nine inclusive, four were forty to forty-nine, eleven were fifty to fifty-nine, eight were sixty to sixty-nine, sixteen were seventy to seventy-nine and eleven were eighty to eighty-eight.

The cause of death was not given in three instances. Of the fifty in which it was given it was as follows:

Some form of heart disease (including cardio-renal disease) caused nineteen deaths. Cerebral conditions, such as apoplexy, thrombosis and embolism caused nine deaths. Pneumonia in some form, including one case of influenza caused five deaths. Carcinoma of the various organs also caused five deaths. Two were said to have died from senility. Duodenal ulcer, enteritis, acute indigestion, appendicitis, acute nephritis, suicide, abscess of the liver, pernicious anemia and spinal sclerosis each caused one death. Death followed operations in five instances of the fifty-three.

The shortest length of time from graduation was one year. The longest sixty years. Forty-eight were graduated in medicine. Three were non-graduates and the status of two was not stated. One had been graduated and licensed one year, five from ten to nineteen years, eleven from twenty to twenty-nine years, eight from thirty to thirty-nine years, fourteen from forty to forty-nine years, eleven from fify to fifty-nine years and

one had been graduated sixty years. The length of time from graduation or license was not mentioned in two instances.

The dates of death per months were as follows: Four died the last half of April, 1929, three in May, four in June, three in July, seven in August, four in September, four in October, three in November, four in December, five in January, seven in February, four in March and one during the first half of April, 1930.

The positions of honor and trust held, both as citizens and physicians were varied. Many were prominent in the political, civic, lodge and church affairs of their several communities.

Three were pioneer physicians of the state, one coming to the territory of Kansas in 1858, one being a founder of the city of Anthony, and one of Dodge City.

Ten, nearly a fifth, of the total number of decedents, had served their country in an active military capacity as follows: Three were Civil War veterans, one being a guard of honor at Lincoln's funeral. One was a Spanish-American War veteran. Two were World War veterans, one other was a captain, and two others majors in the medical corps. One was an army flight surgeon. One was a major in the medical reserve corps during the war, and one was a lieutenant colonel in the medical reserve at the time of his death, making a total of six World War veterans deceased this year. One had served on his district draft board during the World War. Two had been the first commanders of the American Legion posts in their respective communities, Kansas City, Kansas, and Paola.

At the time of his death, one was a trustee of Washburn College. One had served as a member of his local school board. Two as councilmen. Five had been mayors of their cities, and one other was acting in that capacity at the time of his death. Two had been a representative in the state legislature.

Many were on the staffs of their local and neighboring hospitals. One had been chief of staff of the Providence Hospital, Kansas City. Two were serving their internship. Six were railroad surgeons, one being in charge of a railroad emergency Hospital at the time of death.

Three had been pension examiners, one a county coroner, two county health officers. One was surgeon at the State Penitentiary, Lansing. One at the time of his death was a member of the state board of registration and medical examination.

One was a founder of Christ's Hospital, Topeka. One had been president of the Topeka Academy of Medicine and Surgery, and also of the Kansas Medical College. Two were founders of the Kansas Medical College which was later merged wtih the School of Medicine at the State University. Three had been instructors in their specialties in the medical department of the State University. One had been editor of the Kansas Journal.

At the time of his death, one was secretary of his county society. Six had been presidents of their county societies. One had been president of the Atchison, Topeka and Santa Fe Railroad Medical Association. One had been president of the State Eclectic Society. One had been president of the Eastern Kansas Medical Society, and president of the Golden Belt Medical Society, and one was a former president of the Kansas State Society.

One was a member of the American Psychiatrist Association. Two were members of the American Academy of Opthalmology and Oto-Larynology. One had been three times a member of the House of Delegates of the National Society. Five were fellows of the American College of Surgeons.

THOMAS BAILEY ALLISON, Towanda, aged 61, died of duodenal ulcer, November 26, 1929. He practiced formerly at Gueda Springs. Was not a graduate, but was licensed in 1901. Was not a member of the Society.

CHARLES B. APLIN, Solomon, aged 60, died of cerebral hemorrhage April 24, 1929. He was graduated from the Columbus, Ohio, Medical College in 1892. Formerly practiced at Lawn and Delphos. He was a member of the Kansas Medi-

cal Society and a Fellow of the American Medical Association.

ANDREW G. ANDERSON, Salina, aged 59, died of enteritis, August 13, 1929. He was graduated from the St. Louis College of Physicians and Surgeons in 1898. He was an ear, eye, nose and throat specialist and on the staffs of the Asbury Protestant and St. John's Hospitals. He was a member of the Society.

HAROLD W. ANDERSON, aged 27, died at Bell Memorial Hospital, Kansas City, of lobar pneumonia, December 4, 1929. He was graduated from the University of Kansas School of Medicine in 1928. He was acting as an instructor of pathology at the institution and serving his internship in Bell Memorial Hospital at the time of his death.

SHERMAN LA BARON AXFORD, Lansing, aged 50, died at St. Luke's Hospital, Kansas City, of cardio-renal disease, February 27, 1930. He was graduated from the College of Physicians nad Surgeons, Kansas City, Missouri, in 1902. He practiced in Dunlap until appointed physician of the State Prison at Lansing in 1909, which position he held for seventeen years. He had served as president of Leavenworth County Society, and was a member of the Kansas Medical Society and a fellow of the American Medical and of the American Psychiatric associations.

BENJAMIN M. BARNETT, Kansas City, Kansas, aged 74, died of angina pectoris, September 4, 1929. He was graduated from the Jefferson Medical College, Philadelphia in 1882. He practiced for forty years in Rosedale before it was incorporated with Kansas City, and had served as a member of the council and twice as mayor of Rosedale and was active in Kansas City civic affairs. He was on the staff of Bethany Hospital. He served as president of Wyandotte County Society in 1904 and was a member of the Society.

VERNON PERCY BOOTH, Oxford, aged 46, died at St. Mary's Hospital, Wichita, of cardiac infarction, August 28, 1929. He was graduated from the Kansas Medical College, Topeka, in 1909. Had practiced formerly at Dexter. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

DAVID BERNSHAW BUHLER, Pretty Prairie, aged 50, committed suicide by lysol poisoning January 25, 1930. He was graduated from the Kansas Medical College in 1904. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

JAMES WATSON CAMPBELL, Halstead, aged 45, died of coronary thrombosis, January 27, 1930. He was graduated from the University of Kansas School of Medicine in 1914. He was a captain in the medical corps of the World War. He was on the staff of the Halstead Hospital for six years. He was a member of the Kansas Medical Society and a fellow of the American Medical Association and of the American College of Surgeons.

HOWARD M. CASEBEER, aged 75, died in San Diego, California, October, 1929. He was graduated from the University of Michigan School of Medicine, Ann Arbor, in 1876. He was retired for several years. Formerly had practiced at Independence and had served as president of the Montgomery County Society in 1908.

JAMES S. CHASE, Topeka, aged 81, died of influenza January 23, 1930. He was graduated from the Western Reserve University School of Medicine, Cleveland, Ohio, in 1871. He was a Civil War veteran and one of the guard of honor at Lincoln's funeral. Was a surgeon for the Santa Fe and had practiced in Lyons sixty-one years. He was not a member of the Society.

FAY PORTER CLARK, Kansas City, Kansas, aged 57, died of carcinoma of the stomach resulting from his pioneer work with *x*-ray, December 13, 1929. He was graduated from the College of Physicians and Surgeons, Kansas City, in 1898. He had been county physician and was on the staff of the Bethany Hospital many years. He was a member of the

Kansas Medical Society and a fellow of the American Medical Association.

William Emmett Crawford, Council Grove, aged 76, died at the home of his daughter in Kansas City, Missouri, of myocarditis, August 30, 1929. He was graduated from the Kansas City Medical College in 1888. Was a surgeon for the Missouri Pacific Railroad and had been Morris county health officer. Retired.

Jacob Gray Dorsey, Wichita, aged 69, died of pneumonia, November 15, 1929. He was graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1883. He was formerly on the staff of St. Francis Hospital. Was a member of the Kansas Medical Society and of the American Academy of Ophthalmology and Oto-Larynlogy, and was a fellow of the American Medical Association and of the American College of Surgeons.

Allan W. Dortch, Arkansas City, aged 56, died of valvular heart disease and bronchiectasis, March 21, 1930. He was graduated from the American Medical College, Indianapolis in 1895, and from the University of Medicine, Indianapolis, 1898. He was a Spanish-American War veteran. He was not a member of the Society.

Fred Wallace Duncan, Coffeyville, aged 45, died at St. John's Hospital, St. Louis, following an operation for multiple abscess of the liver, July 23, 1929. He was graduated from the Washington University Medical School, St. Louis, in 1906. He was a member of the Kansas Medical Society and a fellow of the American Medical Association and of the American College of Surgeons.

Harry S. Durrett, Ellis, aged 77, died at St. Anthony's Hospital, Hays, of carcinoma of the pancreas, August 13, 1929. He was graduated from the Louisville Medical College in 1879. He was a member of the Society.

Lewis Lindsay Dyche, Jr., Utica, aged 33, died of acute nephritis, April 29, 1929. He was graduated from the University of Kansas School fo Medicine in 1919. At the time of his death was secretary of the Rush-Ness County Society and was a fellow of the American Medical Association.

Charles Ambrose Fisher, Pittsburg, aged 73, died of acute indigestion April 18, 1929. He was graduated from the Medical College of Indianapolis in 1881. He had been mayor of Pittsburg and a representative to the state legislature and was active in politics. He had been county coroner and at the time of his death was in charge of the Emergency hospital of the Kansas City Southern Railroad but had retired from active practice. He was not a member of the Kansas Medical Society.

William Joseph Gates, aged 62, died in Arlington, California, of apoplexy July 4, 1929. He was graduated from the Kansas City Homeopathic Medical College in 1895. Formerly had practiced in Kansas City, Kansas, and had been on the staff of Bethany Hospital and Chief of Staff of Providence Hospital. He was three years major in the medical corps during the World War and was the first commander of the American Legion, Kansas City, Kansas. He was formerly member of the Wyandotte County Society. Retired two years.

Jacob Henry Haldeman, Paola, aged 67, died at Research Hospital, Kansas City, Missouri, of bronchopneumonia, February 18, 1930. He was graduated from the Jefferson Medical College, Philadelphia, in 1883, and had also attended the Kansas City and Rush Medical Colleges. He was a major in the medical reserve corps during the World War and was the first commander of the Paola American Legion. He was on the staff of the Research Hospital, Kansas City, Missouri. He was a member of the Miami County Society.

Frank Kerr, Greenwich, aged 70, died in Wichita of cardiorenal disease, September 23, 1929. He was graduated from the Barnes Medical College, St. Louis in 1894. He was formerly a member of the Sumner County Society. Retired.

Joseph Perry King, Galena, aged 62, died at the home of his son in Pittsburg, of cardiorenal disease, May 28, 1929. He

was graduated from the Eclectic Medical University, Kansas City, in 1915. He had been mayor of Galena. He served as president of the State Eclectic Society, 1927-28.

Henry Nelson Kirkpatrick, Anthony, aged 80, died of senility, January 21, 1930. He was graduated from the St. Louis Medical College in 1878. He came to Kansas in 1858, when it was still a territory. He was one of the founders of Anthony, a member of the council, and the second mayor of Anthony. He was also a druggist and he had been a pension examiner. He was not a member of the Society.

John Calvin Klepinger, Kansas City, Kansas, aged 59, died at Research Hospital, Kansas City, Missouri, of cerebral hemorrhage, August 9, 1929. He was graduated from the University of Illinois College of Medicine, 1897. Formerly had practiced in Herington and Independence. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

George Washington Lowman, Oskaloosa, aged 85, died of cerebral embolism, January 21, 1930. He was graduated from the Cincinnati, Ohio, Medical College in 1877. He was a Civil War veteran and had lost an arm in that conflict. He was a surgeon for the Rio Grande Railroad.

Arthur Lee Ludwick, Overland Park, aged 58, died at St. Mary's Hospital, Kansas City, Missouri, of coronary occlusion, March 2, 1930. He was graduated from the University Medical College, Kansas City, Missouri, in 1894. During the World War he was a major in the medical corps, and attended the Army Flight Surgeons' School, Mineola, L. I. At the time of his death he was a lieutenant colonel in the medical reserve corps. He specialized in nervous and mental diseases. He had served as president of Johnson County Society and was a fellow of the American Medical Association.

Edgar Jacob Lutz, Salina, aged 68, died of peritonitis following an abdominal operation, May 12, 1929. He was graduated from the Baltimore University School of Medicine in 1886. He was on the staffs of the Asbury Protestant and St. John's Hospitals. He had served as president of the Saline County Society.

Thomas L. McCarty, Dodge City, aged 82, died of cerebral hemorrhage April 2, 1930. He was graduated from the Jefferson Medical College, Philadelphia, in 1870. He was one of the oldest practitioners in western Kansas, arriving in Dodge before it was organized as a town. His early day experiences included raids of the hostile Indians and the Texas cattle drives, and he was personally acquainted with most of the pioneer characters of the early days of Boot Hill Dodge. His son was the first white child born there. He was surgeon for several railroads. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

John Calhoun McClintock, Topeka, aged 74, died of chronic endocarditis, June 27, 1929. He was graduated from the Rush Medical College in 1879. He had been on the staff and was one of the founders of Christ's Hospital and of the Kansas Medical College of which he served as president and professor of the Practice and Principles of Surgery, until its merger with the State University School of Medicine. He was given several honorary degres by various Kansas colleges because of his exceptional work for education and medicine in the state. He was a trustee of Washburn College at the time of his death. He had been president of the Topeka Academy of Medicine and Surgery. He had served as president of the Eastern Kansas Medical Association and the Golden Belt Medical Society. He was a member of the Kansas Medical Society. Was retired for six years.

Thomas E. McCormick, Plainville, aged 52, died at St. Anthony's Hospital, Hays, of pneumonia, February 18, 1930. He was graduated from the St. Louis University School of Medicine in 1906. He was a member of the Kansas Medical Society.

James Whittier May, Kansas City, Kansas, aged 50, died at Bell Memorial

Hospital of pernicious anemia, December 19, 1929. He was graduated from the College of Physicians and Surgeons, Kansas City, in 1900. He was a World War veteran. He was on the staffs of St. Margaret's and Bethany Hospitals. At the time of his death he was on the State Board of Medical Registration and Examination. He was a medical author, and for six years editor of the Journal of the Kansas Medical Society. He had served as president of the Wyandotte County Society and Kansas State Medical Society. He was a member of the American Academy of Ophthalmology and Oto-Larynology and was a fellow of the American College of Surgeons. He had been three times a member of the American Medical Association's House of Delegates, 1909-1918-1921.

Morris A. Millard, Topeka, aged 81, died of heart disease July 12, 1929. He was graduated from the University of Buffalo School of Medicine in 1873. He was a pension examiner. He was not a member of the Society. Retired.

William Adam Miller, Kansas City, Kansas, aged 77, died of myocarditis, October 16, 1929. He was graduated from the Jefferson Medical College, Philadelphia, in 1888. He formerly practiced in Salina. He was a member of the Society. Retired.

Linzie Tilden Morrill, Peabody, aged 77, died of senility, February 13, 1930. He was graduated from the Albany Medical College in 1873. He had specialized in gynecology. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

Samuel Murdock, Sr., Sabetha, aged 88, died of angina pectoris, March 27, 1930. He was graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1876. He was a pioneer physician and surgeon in Nemaha County. He was a member of the Kansas Medical Society. Retired.

Joseph Wakefield Myers, Elkhart, aged 45, died of carcinoma of the stomach, August 2, 1929. He was graduated from the University of Kansas School of Medicine in 1913. He was not a member of the Society.

Paul Rexford Neal, Greenleaf, aged 37, died at Augustana Hospital, Chicago, of acute endocardial degeneration, November 12, 1929. He was graduated from Rush Medical College in 1917 and at the time of his death was an intern at the Augustana Hospital. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

James L. Otterman, Kansas City, Kansas, aged 81, died at Emporia, May 15, 1929. He was graduated from the American Medical College, St. Louis, in 1877, and the Kansas City Medical College in 1894. He was a Civil War veteran and was found dead in his room while attending the annual encampment of the G. A. R. He was retired.

William James Phillips, Beaumont, aged 72, died at Wesley Hospital, Wichita, following an operation for carcinoma of the colon, September 15, 1929. He was graduated from the Iowa College of Medicine in 1885. He was not a member of the Society.

Lewis N. Plummer, Muscotah, aged 80, died of apoplexy, August 24, 1929. He had practiced in Muscotah more than fifty years. He was not a graduate but was licensed in 1901. He was not a member of the Society.

James Cyrus Preston, Buffalo, aged 66, died of cancer on the neck, September 19, 1929. He was graduated from the Medical Department of the University of Tennessee, Nashville, in 1885.

Lemmox A. Runnion, Arcadia, aged 75, died at Ft. Scott of myocarditis, February 8, 1930. He was not a member of the Society. Retired.

E. Orlando Sloane, Pittsburg, aged 74, died of myocarditis and encephalitis, February 24, 1930. He was graduated from the Missouri Medical College, St. Louis, in 1881. He was not a member of the Society.

Daniel M. Smith, Kansas City, Kansas, aged 70, died at Providence Hospital

of cardiorenal disease, October 9, 1929. He was not a graduate but was licensed in 1901. Was on the staff of the Bethany Hospital and had practiced in the Argentine district thirty-five years. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

Francis H. Smith, Goodland, aged 76, died of heart disease, June 4, 1929. He was graduated from the State University of Iowa College of Medicine in 1882. He was on the district draft board during the World War. He had been twice mayor of his city and twice representative to the state legislature and always active in civic and community affairs. He was on the staff of the Goodland Methodist Hospital. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

Samuel W. Spitler, Wellington, aged 80, died at the Menninger Hospital, Topeka, of cerebral hemorrhage, June 7, 1929. He was graduated from the Medical College of Ohio, Cincinnati, in 1875. He served as president of the A. T. & S. F. Hospital Association in 1927. He was a member of the Kansas Medical Society and a fellow of the American Medical Association.

Samuel G. W. Stevens, Spring Hill, aged 74, died of cerebral thrombosis, June 19, 1929. He was graduated from the Columbus Ohio Medical College in 1883. He had been a member of the school board. He was a pension examiner. Was not a member of the Society.

Winfield Otis Thompson, Dodge City, aged 51, died following an operation for appendicitis, March 13, 1930. He was graduated from the Jefferson Medical College, Philadelphia, 1903. He was mayor of the city at the time of his death. He was a member of the Kansas Medical Society and a fellow of the American Medical Association and of the American College of Surgeons.

George von Wald, Marysville, aged 84, died in Kansas City, Missouri, February 27, 1930. He was a recluse and retired.

George Samuel Wilcox, Mulvane, aged 56, died of cerebral hemorrhage October 1, 1929. He was graduated from the Kentucky University Medical Department, Louisville, 1904. He was a member of the Kansas Medical Society.

John Wilson, Humboldt, aged 83, died of spinal sclerosis, April 29, 1929. He was graduated from Rush Medical College in 1882. He was not a member of the Society.

James Monroe Winegar, Hamilton, aged 79, died of cerebral hemorrhage December 10, 1929. He was graduated from the College of Physicians and Surgeons, Keokuk, in 1884. He was a member of the Kansas Medical Society. Retired.

What Is the Human Mind?

P. S. Mitchell, M.D., Iola

Read at the Joint Meeting of the Franklin, Anderson and Allen County Societies, at Garnett, April 30, 1930.

To attempt to discuss a subject that Socrates, Plato, Aristotle, Spinoza, Schopenhauer, Bacon, Emerson, James, Watson and other master minds have ground in the crucible and found no solution, seems a travesty on higher intelligence.

It is indeed with a self-consciousness of my insignificance in the psychological and psychiatric world, that I do, and hereby tender you my apologies for the brazen effort.

Without further excuses then, I enter the jungles where angels fear to tread.

To the meta-physician and professed philosopher, mind is a metaphorical football, with which to match wits and dream dreams.

To the fundamentalist, mind is a spirit delegated by God.

To the materialist, it is an energetic product of the brain.

To the psychologist and psychiatrist, it is a means to an end.

To the hypnotist, it is a power to subjugate and become a plaything with which to mystify.

To the evangelist, it is the citadel of sentiment, upon which he directs his howitzers of reward and punishment, to

enlarge his numbers of proselytes.

To the salesman, it is a living.

To the promiscuous lover, it is a toy.

To the balyhoo announcer, it is his stock in trade.

To the quack doctor and patent medicine man, it is a gold mine.

To the fakir, it is making one see what he does not see.

To the physician, it is his associate of life, which must be guided from the cradle to the grave.

Fundamental laws have been advanced and relegated to the scrap heap, ever since Democritus in 400 B. C., offered the atomic theory. From that date till a few years ago, the atom reveled in her glory as being the last division of matter, when the proton crowded her off of first place.

Long before we made the acquaintance of the proton and its satelite, the electron, we were taught that matter and energy alike were indesructible, which, while not proven, remains yet to be disproved. So far as we are able to determine, quantities do not change but the quality combinations of either may be modified in their form only. Even the non-existance of matter, by some, is charged. We must permit Einstein to rest for want of time.

Permitting that to go unsettled, the axiomic fact remains, that a time was when compounds and their complex elements did not exist. It is eminently certain that a pre-elemental period prevailed, when compounds with their molecules and atoms were not in evidence, but the proton with its satelite, the electron, walked supreme. This is the state in which we must place a metal to accomplish alchemy as of the dream of olden times.

Some cataclysm was essential to break loose or knock off the electrons which was to inaugurate the great frolic, terminating in the formation of atoms, molecules, elements, compounds, stars and universes. A reduction in temperature was the essential thing.

Combines and points of attachment were legion. Groupings became choicy and selfish. Why? I do not know. Were the performance repeated, an entirely different order might be the result. Hydrogen was the first element to appear and arrived in single blessedness as one atom. Oxygen followed in pairs and nitrogen in triplets. Calcium, phosphorus, sulphur and others brought up the train but not till carbon broke into the grouping did a commotion arise.

It was carbon, the rowdy and rabble rouser, promoting dissatisfaction and breaking off of electrons, that manifested itself in reproduction, thereby establishing a new order. This freeing of energy becomes the primary life urge.

The carbon group reduction was protoplasmic in character. Chemical laws repeated themselves in demonstrating a replica of the atom on a grosser scale. The cell was the result and life stepped forth on her first parade.

This is only an hypothesis of the genesis of life. Many have been offered. The cosmic ray theory is now being advanced. Perhaps it is the cosmic ray that disturbed the carbon electron. All, that is of interest, in this paper, is the calling of your attention to the relativity and incidence of liberated energy in life's beginning, how it becomes the primary life stream and from desire for continuation, maintains the strongest urge in life's existence.

At a very remote period, life made her appearance in two types. It is not at all improbable, that vegetable preceded the animal. In form they were in many respects alike, while in others paradoxical.

Each maintains a circulatory system. The vegetable has its chlorophyl while the animal has its hemoglobin. Alike they increase in bulk and reproduce. One accepts oxygen and dispenses carbon-dioxide while the other does the opposite, thereby maintaining an equilibrium.

A few of the lower vegetables are motile, but as such, it is due to chemotaxis. The animal is generally motile. Motility is the greatest source for liberating energy but this manifests itself in force and not in the intellectual type that we are seeking. Thus we see there is an expenditure and liberation of energy in every function of life.

The writer found it necessary to enter into a biological discussion to a rather

undesirable degree, to lay the foundation for the genesis of the mind, so will drop it at this point.

This brings us to the directorship of the animal kingdom, viz., the Nervous System.

Under progressive development animal life grew more complex, thereby making an appeal for a means to expedite activities and receive responses. True to its natural urge, as reactionary demands arose, the cell answered the call by furnishing the requirement.

In anticipation of proof for this, Jacques Loeb removed the ganglion which constitutes the entire nervous system of the sea-anemone. He subjected the wounded animal and a check to the stimulus of dropping water. His expectations were rewarded by finding the responses identical. The only requirement, added to the wounded animal, was a greater distance for the water to drop. Hence, the logical deduction drawn by him was that the nervous system is not an essential, but merely a facilitator for reflex action. Mental processes in more highly developed life is merely an attenuated reflex action. As animal life advanced to a yet more complex existence, a more intensely organized administrator was required, which was annexed as a bud and is now denominated the brain. This organ does not appear with the advent of primary embryonic elements but becomes manifest later in the embryonic growth.

Our anthropologic friends, now unhesitatingly insist that man has been a guest of this old planet for some fifty million years, which probably is not far from the truth. If they are correct, the point I desire to make is that it is only fair to conclude that an organ, whose invariable function has been to assume the directing capacity of animal life through a reproductive period of millions of years, on attaining its most highly accomplished development, should be productive of a conscious and analytical intelligence, equivalent in character to that magnificent achievement of which our age so proudly boasts.

Vestigial rudiments of the ganglionic system, representative of lower animal life, continue and function in the human as our vegetative plexuses. In this unorganized system much intelligence may, however, be determined. It is the watchful guard that maintains life during our unconscious periods, we call it the sympathetic system. It often instigates knotty problems to solve and misleads the unwary.

Quoting from Loeb again: "All brain and nerve tissue is protoplasmic in character and differs not in quality but only in quantity, from other tissue." It thereby acts only as a rapid transit.

All terminal nerves lead directly or indirectly to the brain. Ganglia are to be found at many intersections. It is a generally accepted theory that impulses eminate from the cells or gray matter and are transmitted by the white fibers. This brings us face to face with "Our Hypothesis."

As before stated, the brain is a budded-on organ in the higher animal life, including man. There is no reason to believe that the brain responds differently in the animal from that of man, allowing for man's advanced development. No one question, that the brain is the throne from which all orders radiate. But how?

My answer. The human infant enters the world at birth without mind but endowed with a brain, qualified in character, as a gift from its progenators. The brain is a blank, of white and gray matter or in other words composed of fibers and cells, ready for the gong. The brain maintains two functions, viz., to act as a recepticle and to generate a force or energy; which, for my descriptive argument I shall term Beta-energy. Beta-energy is a highly specialized type of force, whose function it is to get impressions to the ganglionic cells and obtain a response therefrom.

All terminal nerves connect directly or indirectly with the brain. They are open at all times for Beta-energy to pour through. The stimulus of an impression is required to open the circuit. We are unable to attach energy meters to nerve terminals to prove our contention but we must think of mental activity in terms of circuits, neutralization, insula-

tion and such as are explanatory by physical means.

Let us use the optic nerve as the example. The infant's eye opens for the first time to light. Light waves from an object form a picture upon the retina of the child. Perhaps the first few are inadequate to open the circuit and stimulate a response, but the call in time is answered. So let us reason how this impression actually reaches the brain. Why does it not fall lifeless after striking the retina?

To illustrate, may I cite an analogous action; band music in Kansas City strikes the diaphragm of a radio broadcasting machine. It comes in contact with the receiver as a sound wave. Why does it not cease to function at this point? Because, attached to that diaphragm is a device through which an electric current passes that becomes broken by the sound waves. These sound waves are transmuted into electrical waves which pass through an electrical device in our receiver, thereby delivering the identical vibrations of sound or music to us. All the rest consists of amplification and is not identified with our subject. In this case sound is not conducted through space, but transmutation of the sound as electrical waves.

In the case of the human eye, a light picture falls upon the retina and should die there but for the fact that the impression opens the circuit, B-energy pours through and transmutes the light waves, recorded on the rods and cones, into B-energy, which is navigable to nerve fibers and intelligible to brain cells.

The impression as transmuted B-energy is delivered to the judgment area and responses relayed back, where they are interpreted to such nerve terminals as are required. Each repetition helps to develop a track that is made easier to travel each consecutive time that it is used. This we denominate habit and probably is an aid to memory. In the beginning many repetitions are required, many associations from without and from within are brought together to complete a mental structure. All primary impressions must arise from without. Association of impressions already within may occur, giving rise to new combinations and thoughts. These are often erroneously construed as being picked up from the uninhabited jungles of the brain as a primary impulse or mental perception.

What is mind? It is the combined responses of brain cells to impressions from without and their associations within as interpreted through and by B-energy to the nerve terminals. It is ever in the making. All major impressions are conducted over selective and individual tracks. All impressions carry many associatiated ones with them. The first few years design the paths that remain well defined throughout life. Probably nerve fibers become sensitized to the repeated service and respond after an intelligent manner to aid in this complicated work.

The exact method of responses from the brain cells is yet beyond us, but we are at least safe in not endowing them with primitive initiative intellect. Their primary activity must all be as a response from impressions. These, by frequent repetition and reassociation arrive at a point of decision which accounts for reason, judgment and will.

Will this hypothesis meet all the postulates? Let us see how it explains an answer to love, will, emotion, the subconscious mind and hypnotism, which seem to be the greatest bones of contention.

What is love? What makes us behave as we do? "Back of all living things," says Freud, "there is an energetic drive, to accomplish certain ends, which brings about a certain tension within the individual until gratification." I hear you ask, "from whence comes this drive?" It eminates from that energy referred to, early in this paper, in explanation of the genesis of life. It finds its origin in the freeing of energy in the early carbon atom disturbance, incident to reproduction.

Freud speaks of this as self-love, while some one elsewhere, refers to it as libido, meaning desire. "Whatever we term it," says Karl Menninger, "it is the primitive stream of energy."

"As life progressively advances this stream divides," again says Menninger, "desire for others than self, comes in evidence." So, the libido of sex becomes manifest.

The original energy life stream or the libido of self-sustenance, which represents the self-love of Freud, wields the entire urge of life in its beginning, but at a later period, we are told by Menninger, that the divided branch very frequently holds the dictatorial hand.

Freud, in his psycho-analysis, is frequently misunderstood and misquoted, which makes him the victim of much unjust criticism, in that he is accused of vulgarizing life.

Now as to love, in its latest model of 1930: It is this same libido dressed up in Sunday clothes. It is that divisional branch of the original stream of energy, which has lived for at least three thousand years, under a regime of art, music and poetry, evangelists of love. These constitute a guidance and education in a suppression of desires and an exaltation of the sublime. So, this libido, when floundering in the mire of exotic love, and sustained by the embellishments of an idealism, drifts into a chaotic interpretation and misapprehension of life's performances that breeds trouble. Idealistic love, then, is our cherished libido for the sublime in the opposite sex. It is a fleeting phantom, holding that substantially important position of attracting the sexes, to continue the race. Congenial, orthodox, monogamic mating, does not rightfully come under a paper of this character, but holds a proper place under a moralistic regime.

Will, the weather-vane of responses to life's impressions, represents the determination, resulting from the sum-total of brain-cell reaction, at a given time. Those shownig more "will-power" than others merely have more obsessed routings. Let us keep in mind that many of our most definitely profound sidetrackers are characterized by their "will-power."

Emotion is a negative libido. It represents that definite self love of Freud, modified by sublime impressions from without.

The sub-conscious mind: There is none. What is spoken of as the sub-conscious mind, merely represents those brain-cell responses to impressions from without, or that have been associated within during a period of semi-consciousness and subsequently recalled from their submerged existence. Frequently the act is mistaken for an unrecognized performance of synthetic thought, completely initiated within the mind itself. This must be positively erroneous.

Hypnotism puzzles many. It merely represents concentrated impressive performance by the hypnotist, so as to direct unusual impressions by the way of desired routings. However, much of life is potentially activated under this influence.

Very little do we recognize to what a large degree the business conscience of the country depends upon a directing of hypnotic influence. Observe the Stock Exchange, when a king dies, or a man of influence broadcasts an opinion. Mr. Hoover's word of assurance, that "business was safe" became a supporting column to our financial structure during the panicky days of the winter. A word from Ford or Edison thrills the nation. One man will proclaim a community totally penniless when a talkfest will follow and carry away $100,000 on worthless securities.

Able physicians may conscientiously labor and sweat without recompense while an ignorant but audacious bombastic, fortified by the hypnotic influences of broadcasting, is able to extract three prices for unscientifically prescribed drugs from a credulous bunch of hysteric radio listeners.

All impressions must originally come from without or from associations within. All impressions, associated within, must primarily come from without.

Does this theory explain mental aberations? Let us test them. The mystic, the eccentric, the spirit medium, the hypnotic subject, the ascetic, the hysteric, the religious fanatic, the drug addict and alcoholic inebriate are frequently designated as those in the twilight zone. These should not be termed insane but journeymen on a temporary side-track, most

of whom may be restored to the main track, if not too completely obsessed and adherent to their side-track associations.

We must recall that all impressions and perceptions, at least of a major type, must maintain a particular and selected routing. These will at all times carry along their relative associated impressions. To follow other than this systematic order, chaos must reign and such is what happens in the aberrations. Impressions break over their insulations and lose themselves in the jungles of cross puzzle routings.

In the normal impression routings, thousands of qualifying related impressions must be drawn into the current and carried along to supply man's manifold mental visions. Likewise, selected tracks are used for orderly direction to nerve terminals. In case of aberrations, the confusion arises, not from a sick mind or diseased mentality, but from some interference with the normal tracking, that causes side-tracking and detouring, thereby associating irrelative impressions.

One can readily vision how these associations may become criss-crossed when considering the multiplicity of impressions with one given thought. One hears a fire bell. Some such as follows shoots across the perspective of his mental vision. (I use the term mental because we are acquainted with the term) "Whose house?" "Is it mine?" "Wonder how it caught?" "Are the children off the street?" "Wonder if they are insured?" "Why do the crowds rush to a fire?" "Where will they live now?" And many more. These are all associated impressions, connected and reconnected many times before. So it is little wonder then that short circuits and detours are made.

The point I wish to make is that it is not a faulty or diseased mind but a detour or side-tracking of energy impressions or responses taking on unrelated associations.

This holds good with the completely confused or helpless insane. I was called to see what my psychiatric friends, I believe, would term a precox. She was near the menopause. As I entered, I addressed her, "How are you Mrs. S.?" "I do not know you," she promtply retorted, and began singing, "Nearer My God to Thee," adding with disgust "Oh Hell, I can't sing," then with an intelligent beam in her face, she said, "You know Abe Lincoln and I were making hay when King George came along," with a drowning spit on the floor, saying, "Bring me a drink, I'm burning up on inside," then sang some more.

This is a familiar example. Her impressions were clear and responses unbroken but routings on a by-way and associations remote and unrelated.

While the above are simple equasions and the more aggravated illusions, hallucinations and delusions are found only in institutions yet all must respond to like postulates.

Time forbids the discussion further of this greatest of all fascinating subjects, so will close with a short summary.

First, there is neither mind nor subconscious mind. What we have pleased to call mind merely represents brain cell-responses to impressions as transmuted to them by B-energy. The subconscious mind merely represents a sensitization of the brain-cells, in their response at a semiconscious interval and later revived from its submerged associations. Intelligence is man's responsive contact with the world. Mind does not become sick or diseased. Mental aberrations are side-tracks of B-energy in transit.

Personality, of which so much is being talked, is misleading in its present interpretation. Menninger's wonderfully delightful and highly instructive book, The Mind, is timely and should be in the hands of every doctor, yet this paper must take issue with his views on personality. Some people truly are queer. Some seem especially adapted in given lines. These are found in progeny of parents who, in some way, have placed impressive activity upon the cells in that particular determination and the cells of the child respond to the requirement. Repetition of act and response to libido complete the picture. Personality does not exist as a faculty.

Is the hypothesis logical and construc-

tive? It is logical because it is thinkable in terms that are familiar to man's intelligence. It is constructive because it will simplify the classification of mental diseases. It should emblazon the path of the psycho-analyst. It will iron out many of the knotty diagnoses for the men in general medicine and last but not least, as child values are humanity's most sublime and precious asset, it will promote a guidance of infant intellect along a routing to its most advantageous culmination.

For nearly a third of a century, our schools and society have been drifting under a theory of living that, in its ultimate results, is undermining the very foundation of man's responsible relation to society. I refer to the attempted development of initiative in the child, as advocated by John Dewey, now Professor Emeritus of Columbia.

The devotees of this doctrine would have one believe that in some remote corner of mind's keep-sake box there is a mental faculty ready for unfoldment, and by a little encouragement it will expand and grow by its own momentum. The writer submits this thesis as proof of the fallacy of that unscientific theory.

All impressions must be originally derived from without. Quality of responses will depend upon the character of the brain as furnished by its progenitor, plus. Brain, like other tissues, reacts to demands placed upon it and thereby becomes manifest in the progeny.

Infant capacity, therefore, represents the degree of ability that its brain cells possess in responding to impressions, and as delegated to them by their progenitor. This must finally be modified by repetition and libido. Mind (?) is a response, ever in the making but with its basic design largely laid during the first eight years of life. The first two years are of major importance.

Child development, piloted by modern psychological theories, at present advocates encouragement for the expansion of one's normal self. The child is made to seek his own impressions with little or no restraint, discipline is deplored, tantrums are acceptable, pleasure is made the goal, responsibility is not assumed and much of life's mental architecture is so designed that a complete reversal is required at maturity. Initiative becomes a license and the inferior complex a doting slave to some remorseful habit.

In contradistinction, the theory of this paper teaches that mind merely represents a series of responses. Every impression is a part of that intellect. The more exalted the impressions, the more sublime is the so-called mind. The more the child is guided in a dignified manner, the more ennobled will be his intellect. Society's mutual association requires a respect for authority. Then discipline must be a systematic regimen of the infant's mental menu. Temperamentals must be schooled and tantrums eliminated without a purchase price. Poise, which may be tinctured with pleasure, should be the goal. Duty and responsibility must be the paramount force that anchors them to society and life.

Every infant's experience and the impressions received must be a part of its future mentality. When properly directed it will exalt the sanctuary of the home, strengthen the bulwarks of government and weave a social fabric to be attained in no other way.

———R———

Coronary Thrombosis

H. T. Jones, M.D., Lawrence

Read before the Douglas County Medical Society, May 1, 1930.

Coronary Thrombosis as a clinical entity has only been recognized for about the past fifteen years, and the greater amount of knowledge concerning it has been assembled by practicing clinicians and in post-mortem findings.

For many years isolated cases of rupture of the heart, aneurysm of the ventricles and occlusion of the cononary arteries have been found at autopsy, but only considered interesting as pathological processes and as not having clinical value, as it was considered impossible to recognize these conditions before death.

Sir William Osler[1] speaks of coronary thrombosis being found at autopsy but did not diagnose it before death. Sir James Mackenzie[2] does not mention it in his last works on "Angina Pectoris,"

published in 1923, so it is apparent that he did not recognize it clinically.

Krehl[3], 1901, and Huchard[4], 1899, called attention to the frequency of coronary thrombosis, ruptured heart and aneurysm of the ventricle in autopsies after death from angina pectoris, but did not recognize the condition during life. Dock[5] in 1896 made the diagnosis and reported a case of coronary thrombosis, the correctness of the diagnosis being proven at autopsy.

The first satisfactory clinical reports of coronary thrombosis were published by Obratzow and Straschesko[6] in 1910. They established the triad of symptoms now recognized as caused by coronary thrombosis; severe lasting retro-sternal pains, dyspnea and orthopnea and finally gastralgia. They also called attention to many of the features recognized as important findings; gallop rhythm, Cheyne-Stokes respiration, pericardial friction rub, distant heart sounds, pale cyanosis and mural-thrombosis.

In the past fifteen years American physicians have added much to our knowledge of this condition. First among these is J. B. Herrick[7] who started publications about it in 1912, and since 1918 much has been published by S. A. Levine[8]. It was not until 1925 that coronary thrombosis was considered as a specific problem in England. A most important help in the diagnosis was made by F. M. Smith[9] while he was working with J. B. Herrick when he found that certain electrocardiographic changes were fairly characteristic of the acute stages of this condition.

ETIOLOGICAL FACTORS

There is no one specific disease that is in any way a causative factor in coronary thrombosis, nor is there any indication that focal infections play any part, nor is there to date any indication that this condition has been brought about by any acute infection. Fever and leucocytosis follow the initial stage and do not precede the attack.

It is frequently an end result of angina pectoris and nearly all histories of this condition mention previous attacks of angina pectoris.

Diabetes is not a causative factor although diabetics do have coronary thrombosis. About twenty per cent of 145 cases had a glycosuria, but the death rate and ages of this twenty per cent were so close to the total cases that it was considered that the diabetes was not a causative factor.

Hypertension and arteriosclerosis is the most common factor in the development of this condition but this is also true in angina pectoris. Syphilis has not been found to be a causative factor.

Heredity seems to play an important part in the etiology of this condition, also the inherited characteristic type or build of the patient. The typical patient is a well set-up person, somewhat overweight, generally of more than average physical strength who has enjoyed unusual good health. The condition is rare in the thin people.

Coronary thrombosis occurs in the later years of life, the average being 57 to 58 years. The largest number of cases occur between 60 and 69 years, next 50 and 59 years and over ninety per cent of all cases occur between 40 and 70 years of age. The sex ratio is three males to one female.

The typical attack of coronary thrombosis occurs in a patient with a history of previous angina pectoris attacks, but unlike the angina attacks it is not precipitated by effort or exertion, but frequently occurs while he is quiet. Yet the history often reveals unusual physical effort a short time previous to the attack.

When the attack does occur the patient is quickly aware that something terrible is happening; he knows that this is different from any of his previous attacks, and if he survives, he can always remember the date and hour of the catastrophe. Death is often instant, and, as coronor, I have seen several cases which were undoubtedly due to this cause. If the patient survives the initial shock, we learn that he was stricken with a severe pain in the chest, or sometimes in the upper abdomen. The pain is constricting or sqeezing in character and may radiate to the arm or throat, as in angina pectoris. The patient may collapse or become unconscious, but more often has

a sense of extreme weakness. There is often vomiting at the onset of the attack, and this, with the general feeling of distress and abdominal pains, often causes the condition to be called acute indigestion. The diagnosis of a death from acute indigestion in an elderly patient is more than likely wrong and should be coronary thrombosis.

If seen within an hour after the beginning of the attack, the patient presents the picture of suffering extreme pain and seems to be in shock; he is pale and the skin is moist and cold and he has an ashen gray color; his pulse will be of small volume and rapid and there is usually a fall in the blood-pressure, which is the opposite to that found in angina-pectoris where the pulse rate remains the same and there is liable to be a rise in the blood-pressure. At times the pulse and blood-pressure do not change for a day or more. Sometimes the picture is one of edema of the lungs and moist rales are heard at the base of the lungs. Often later the liver becomes enlarged and tender from congestion. Early in the attack the upper abdomen has a board-like rigidity, simulating the perforation of a gastric or duodenal ulcer or an acute pancreatitis or gallstone.

Upon examination of the heart, the weakness of the sounds at the apex is the most striking abnormality. In my experience the most striking symptom is the intolerable pain and anxiety, requiring from one-half to one grain of morphine to even quiet the patient, not relieving but merely making the pain bearable. After twenty-four hours the pain subsides in severity, a slight fever, about 100° F., and a leucocytosis of 15,000 W. with eighty per cent of polynuclears develops.

Some authors lay great stress upon the development of a pericardial friction rub after a few days. Personally I have never heard one, possibly because I did not examine closely enough, or failed to recognize it if it were present, probably losing it in the basal rales due to edema of the lungs.

After a few days the fever and leucocytosis subside and the patient feels and looks perfectly well. Even under these favorable circumstances, the outlook is grave and death can come very suddenly.

In order to understand what is taking place we must recall the pathological changes due to thrombosis. That part of the ventricle which was supplied by the thrombosed coronary artery has become infarcted. The necrosis may extend outward and involve the pericardium, and if this happens to be on the anterior surface, a pericardial friction rub will be heard, but if it involves the posterior wall, we will not hear the friction rub. If the interventricular septum is involved, various degrees of heart block may develop from the damage to the conductive tissue, and if the degeneration from the infarcted tissue moves inward, an endocarditis will develop and a mural clot form over the necrosed tissue.

As the coronary arteries are not end arteries, an attempt at repair is made by anastomosis, and new blood vessels are formed. The necrotic tissue may soften and the ventricle rupture with instant death, or the repair may be sufficient and scar tissue form and recovery be complete, or the repair may be weak and an aneurysm form; or from the mural clot emboli may be carried by the circulation to any part of the body, especially the legs or to the brain, kidneys or lungs. The greatest danger from rupture or embolism is during the second week.

SUMMARY

Angina pectoris generally precedes attacks of coronary thrombosis, but in some instances no angina had been had nor is there any evidence of any important preexisting disease.

Coronary thrombosis frequently develops in longstanding mild diabetics, but as the age incidence is the same in diabetics as in non-diabetics, it seems that the diabetics merely indicate the type of individual who would develop coronary disease rather than that diabetes had any causative relation to it.

Hypertension was present in the great majority of cases, but some patients are known to have had normal blood-pressure before the attack. Arteriosclerosis

was a very variable finding, in some it was limited to the coronary arteries.

Syphilis has been found to be a very rare cause of coronary thrombosis, and other infectious diseases seem to have very little etiological significance.

Hereditory factors were found to be most important, especially in those patients having coronary thrombosis at an early age. Possibly as a part of the hereditary factor there seems to be a certain distinct physical type of individual more apt to develop this disease. The well built and strong individual, somewhat overweight, whose limbs, especially the forearms, are round instead of flat. He has generally been quite active physically, either in sports or work.

The average age is about 58 years. The sex ratio about 3 males to 1 female. The disproportion in the sex distribution is not easily explained, but brings up the possible relation of physical effort and tobacco.

The typical clinical picture of coronary thrombosis was described. In addition there are certain atypical features that are easily overlooked and which are important in making a diagnosis. The pain may vary from a slight discomfort in the chest to the most terrific agony and vary in location from the upper abdomen to the upper sternum, or occasionally the attack may be entirely painless, or the picture may resemble an acute surgical upper abdomen.

Fever and leucocytosis as a rule develop early, but a few rare exceptions to this have been reported. The temperature must be taken rectally, as, owing to the dyspnea, we cannot rely upon the mouth readings. The important features upon examination were the appearance of shock, the distant heart sounds, gallop rhythm, the development of various irregularities in the rhythm of the heart, occasionally a pericardial friction rub, rales in the lungs, and sometimes engorgement of the liver. Certain changes in the electrocardiograms were found to be invaluable as aids in diagnosis, both during the early days and also the later weeks following the attack.

The urine frequently contains sugar and evidence of renal damage as albumin and casts. At times there is marked oliguria or a suppression of urine. These findings are often transient.

The important conditions that at times have to be considered in differential diagnosis are acute surgical condition of the abdomen, angina pectoris, pneumonia, diabetic acidosis, and, finally, so-called myocarditis. The proper diagnosis is sometimes difficult.

The prognosis in individual cases is most unsatisfactory. In general, about fifty per cent make an immediate recovery. No single feature seems to be reliable as indicative of a good or poor prognosis. Apparently mild cases occasionally die and very severe ones recover. Slight differences in the mortality are found when certain factors were analyzed such as age, sex, the development of pericarditis and auricular fibrillation. Ventricular tachycardia and heart block seem to have a greater than average of mortalities.

The question of treatment for the present must be based on theoretical grounds as there is no data available to compare the end results. The acute and rapid character of the disease often makes our deductions as to therapy fallacious, because many drugs are given in a short time and it is difficult to appraise the proper value of any single one. The proper understanding of the pathological process going on during coronary thrombosis will help to some extent in rationalizing the therapy.

THE BLOOD SUPPLY OF THE HEART

The right coronary artery in the typical average heart supplies the entire right ventricle with the exception of the left third of the anterior wall. Besides this, its left ventricular branches supply the right half of the posterior wall of the left ventricle, and a small strip of the interventricular septum. The left coronary artery, on the other hand, supplies the whole remaining part of the left ventricle, the small left anterior portion of the right ventricle not supplied by the right coronary artery, and a small anterior strip of the interventricular septum. The areas of junction on the posterior surface of the left ventricle and on the anterior of the right ventricle

are supplies by both vessels. Thus the intervening portion of the interventricular septum is supplied by branches from the right posterior descending branch and the left anterior descending branch. (From the blood supply of the heart, Louis Gross and Paul Hoeber, N. Y., 1921.)

A careful pathological study of 46 cases by S. A. Levine revealed some interesting correlations with the clinical features. It was found that a mural clot sometimes formed in the right as well as in the left ventricle as the result of a thrombus of the left coronary artery. This happened when the interventricular septum was involved. There were two painless cases in which the right coronary artery was thrombosed. In nine cases rupture of the ventricle occurred. The most frequent artery involved was the left descending coronary, and the favorite site of the thrombosis formation was about two c.m. below the bifurcation with the left circumflex coronary artery.

CASE REPORTS

My interest in this condition is in part due to the fact that in the last four years I have had four patients who were not only patients but also very close friends die from coronary thrombosis. The two cases that I am reviewing were among these and I am using them as their records are over a longer period and more complete.

J. W. H., age 59 had suffered from slight angina attacks for several years, to ward off these attacks he walked so slowly that his friends would not take the time to walk down town or on the street with him. Examinations made yearly from March, 1921, to August, 1928, show an average blood pressure of 150 systolic and 95 diastolic and the urine negative at each examination, except that in August, 1928, the urine showed a trace of albumin and there were many hyaline casts. At the examination in August, 1928, the blood pressure was 150 S. and 95 D. the pulse 68 per minute and the volume good. No valvular lesions nor irregularity of rhythm were observed.

More from my personal knowledge of him and from the slight changes that had taken place in his physical condition over the years of my examinations, and not from the findings of the last examination, I advised him that his death was liable to be sudden and that it would be well to prepare for such an end.

October 30, 1928, at 5 a. m. I was called to see him. I learned that he was awakened at 2 a. m. with a sense of constriction of the chest, orthopnea, gastric distress and was unable to stay in his bed. He drank several glasses of hot water with soda before he called me but did not get any relief. When I arrived he was downstairs reclining in a chair. He had a pale ashen appearance and was pulseless. Before any treatment could be administered he died.

Autopsy: A large well built muscular man, overweight but not grossly fat. Nothing significantly pathological was found except in the heart. The heart was small for his size and had an excess of fat present. In the left ventricle on the posterior wall an area of scar tissue about four by two c. m. was found but not sharply defined from the normal musculature. Upon dissection both coronary arteries were found to be sclerotic, and a fresh thrombus in the left coronary artery. The endocardium and valves of the heart were normal. With the exception of a few yellowish plaques in the aorta it was elastic and free from sclerosis, nor was there any sclerosis of the mouths of the coronary arteries.

Microscopic report: A section through the posterior wall of the heart in the scarred region showed diffuse masses of connective tissue surrounding a bundle of heart muscle which was badly degenerated. There was no sharply defined area such as would be expected if this area had been the result of an infarct, rather there was a diffuse fibrosis.

A section through the left coronary artery showed great thickening of the wall of the artery with fibrous connective tissue. There was no calcification but there were numerous cholesterol slits. At one side a mass of connective tissue projected into the lumen of the vessel and

the lumen itself was occupied by a red thrombus.

A section through the circumflex branch of the left coronary artery showed the same thickening of the subintimal layer with connective tissue and the lumen was almost completely filled with an organized thrombus which was canalized. The small remaining lumen was also filled with a fresh clot. I was unable to get any history of when this damage to the heart muscle, which had been repaired, occurred.

W. W. B., age 54, May 30, 1929, after attending the races in Kansas City and eating a hearty evening meal was suddenly attacked about 10 p. m. with a severe constricting pain in the chest, gastric distress, vomiting, dyspnea and orthopnea. He drank two glasses of hot water and soda before calling me. A hypodermic of morphine gr. ¼ at 10:50 and another at 11:05 were necessary to give him any relief. His skin was ashen gray and the sweat poured out, and he was thrashing about, unable to stay up or down. His pulse was 110 per minute, irregular and his heart sounds barely audible over the apex of the heart. The next day his blood pressure was 90 systolic and 70 diastolic, while for the past four years his systolic was always from 160 to 180 and his diastolic never below 100. His improvement for the next few days was satisfactory and except for being extremely nervous, restless and very anxious about his condition he appeared fairly normal, although he had a temperature of from 100° to 101° F., and his blood pressure was below 120 systolic. He seemed on the road to recovery when on the afternoon of June 12, while his nurse was off duty he got up and took a tub bath, he died suddenly at 9 p. m.

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TUBERCULOSIS ABSTRACTS

Early European statistics, based largely on studies of groups suspected of having tuberculosis and living in populous cities, created the impression that all adults and nearly all children reacted positively to the tuberculin test. For that reason, the value of the test was unjustly discounted. Infection is not so prevalent in this country, especially among children, and since the tuberculin reaction is a very simple measure and furnishes a base line in the diagnosis of early tuberculosis, its value is being reestablished. Charles Hendee Smith, from whose paper, "Tuberculin Skin Reactions," the following abstracts are derived, pleads for a more consistent use of the test, and at the same time emphasizes the need for greater precision in making and interpreting the test.

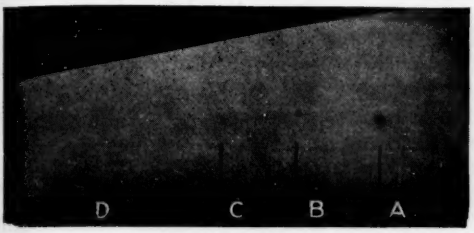
TUBERCULIN SKIN REACTIONS

Tissues which have once been sensitized by living tubercle bacilli develop the power to react to tuberculin. A positive tuberculin reaction means that the tubercle bacillus has lived and grown in the body. Koch introduced the general, or subcutaneous tuberculin reaction in 1890. In 1907, Pirquet developed the cutaneous scratch test, and the same year Wolff-Eisner and Calmette described the conjunctival test, while Moro gave us the percutaneous or inunction test. About a year later, Mantoux introduced the intracutaneous test, and shortly after that Hamburger and Monti used the hypodermic, or "Stich" method. The object of each of these tests is to bring tuberculin into contact with the deeper epidermal cells and, therefore, the intracutaneous and "Stich" tests may be expected to be more accurate that the Pirquet and Moro tests.

PIRQUET TEST UNRELIABLE

Because of the simplicity of the technique, the Pirquet test has gained popularity and has been used in many countries as a routine procedure. But it has

distinct disadvantages. If the scratch is too deep, the subsequent swelling may, to an untrained observer, resemble, a positive reaction. A greater disadvantage is the uncertainty of the test because the tuberculin may not be kept in contact with the cells of the deeper layer of the skin long enough to excite the specific response. Many children fail to react on the first test, yet show a positive reaction when retested a few days later.



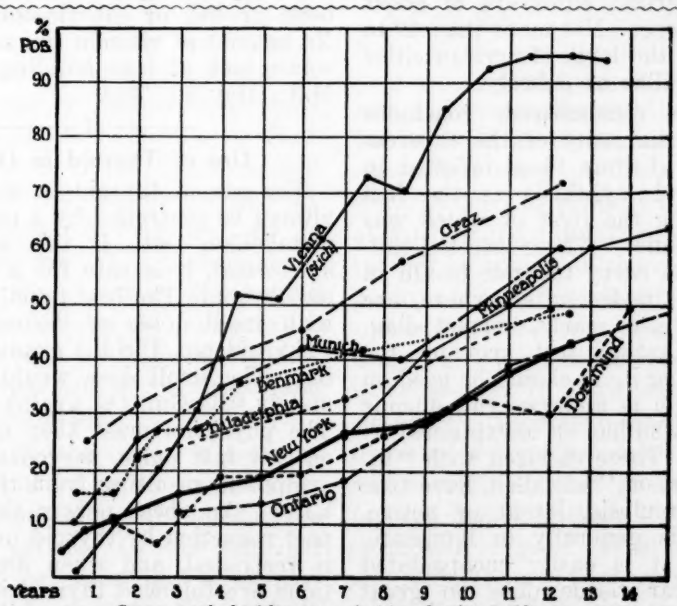
Pirquet Reactions and Control
A—Pirquet positive, B—Control
C—Pirquet negative, D—Mantoux

This is not due to the raising of the sensitivity by the first test, for if two tests are made at the same time, one may fail while the other reacts sharply.

The unreliability of the Pirquet test, says Smith, became manifest to those in the Children's Medical Division at Bellevue Hospital about ten years ago. The Mantoux reaction was adopted in the hope of finding a more accurate test. Immediately, it was found that many patients reacted definitely to the Mantoux test and failed to react to the Pirquet, although two of the latter tests were always done. This difference persisted year after year and at about the same rate; i. e., the Mantoux test giving about twice as many positive reactions as the Pirquet. For several years, both tests were performed on all children, but the Pirquet was finally dropped as a waste of time because of its uncertainty.

CAREFUL TECHNIQUE ESSENTIAL

After trying various dilutions, Smith found that 1:1,000 is the most satisfactory, stronger solutions (1:200, 1:100, or 1:10) being used if necessary to retest, though these stronger solutions should never be used for the first test as sloughing may result. Making up and keeping the solution is not difficult, but the usual precautions must be strictly observed and errors of technique must be guarded against. For example, a needle, or syringe that has been used for tuberculin should never be used for the control nor for a Schick test, as tuberculin may remain active after boiling several hours and cause a reaction. Acute illness, espe-



Curves marked with names of cities showing incidence of positive Mantoux tests by years.

cially if there is high fever, may suppress the reaction. Severe tuberculosis, such as general miliary tuberculosis or a wasting, chronic disease, may obscure the reaction. The tuberculin must not be too old nor contaminated with bacteria or molds.

PIRQUET AND MANTOUX TESTS COMPARED

As a means of comparing the reliability of the Pirquet with the Mantoux test, 3,112 children (ranging in age from birth to 13 years) were given two Pirquet tests at the same time that the Mantoux was given. Seven and eight tenths per cent reacted positively to the Pirquet test, while 16.5 per cent responded to the Mantoux. This confirms the opinion of others that the Pirquet test is unreliable and that epidemiologist studies based on the Pirquet test are, for that reason, open to criticism. Smith has gathered and compared graphically the tuberculin test results of various groups of children in American and European cities. All of these inscribe so characteristic a curve or slope that it is quite possible to calculate the incidence of positive reactors at given ages in a given place. It is interesting that the curves for Vienna and Graz are distinctly higher than for other European cities and that all the curves of American cities are of about the same incidence. Not more than 40 to 50 per cent in the large American cities harbor the bacillus at puberty.

It must be remembered, concludes Smith, that "the army of the tuberculous is recruited from those infected in childhood" and "phthisis is the last verse of a song the first of which was sung in the cradle." These infected children, then, who carry tubercle bacilli in their bronchial nodes or elsewhere, are the ones who need early, correct diagnosis. The Mantoux test provides the means of making it. It should be used on every child who is underweight, anemic or languid or who has an unexplained irregular fever. These children with "tuberculous infection," so-called, have true incipient tuberculosis, latent or active. This disease is generally in lymphatic tissue, where it is easily encapsulated and where scar tissue does no great harm. Under intelligent, watchful care they usually do well. When the disease has involved more important structures, such as the lungs, bones or meninges, the damage is greater, the cure is more difficult or impossible, and the diagnosis has been made too late.—Tuberculin Skin Reactions, Charles Hendee Smith, Am. Jour. of Dis. of Children, Dec., 1929, Vol. 38.

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The Action of Vitamin D

Viosterol administered to animals over long periods in doses 100 times greater than the minimum antirachitic level showed no effect on general appearance, growth, reproduction, or resistance to respiratory infections. An over-dosage ten times greater was just perceptibly harmful, 4,000 times overdosage definitely injurious, and 40,000 times overdosage strongly toxic. Apparently the harmfulness may be modified by other dietary factors. Recent studies have made it clearer that vitamin D controls calcification of the skeleton by dissolution and deposition of the bone salts. The mineral content of the bones is the resultant of these two actions. Calcium and phosphorus must be present in the diet in sufficient amounts and in appropriate relationship to each other before proper bone growth or calcification can occur. No amount of vitamin can correct an absolute lack of bone-building salts. (J.A.M.A., May 10, '30.)

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Use of Thyroid in Obesity

The use of thyroid in obesity should always be controlled by a previous basal metabolism test. If this is normal or subnormal, it is safe for a physician to use thyroid. The best practice is to start with small doses of desiccated thyroid (Thyroideum, U.S.P.) gradually increasing. The small dose would be approximately 0.33 Gm. (½ grain) twice a day. The physician must keep a sharp lookout for fast pulse, nervousness or other symptoms resulting from thyroid stimulation. An obese person should not expect reduction by thyroid unless his diet is restricted, and when dietary restrictions are followed thyroid is not needed as frequently. (J.A.M.A., May 31, '30.)

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TAKE YOUR CHOICE

It has never been the policy of the Society to espouse the cause of any political party or faction.

It has never attempted to control or influence the political preferences or prejudices of its members, and the Journal, as the official organ of the Society, has endeavored to maintain a consistently neutral attitude toward the candidates who were seeking the votes of the people, except in an occasional instance when one or more of the candidates were known to be hostile to all efforts of the medical profession to conserve the health of the people and advance the science of medicine. In instances of that kind it is reasonable to presume that one of our profession will hold himself under less obligation to the political party with which he is affiliated than to the promotion of the health and happiness of the people.

In a few weeks the voters in each political party will be called upon to express their choice of candidates for the various state offices. Of the principal candidates for governor, this being normally a Republican state, the attitude of Mr. Reed, the present incumbent, and Mr. Haucke, his opponent in the primary, is of most concern to us. Without definite assurances from either of them we are left to appraise their possible value to us in our efforts to advance the science of medicine, by a study of past performances.

During the campaign of two years ago our Society was very much interested in securing the passage by the legislature of the Basic Science Law. Candidates for seats in the legislature were interviewed and a sufficient number of those elected had pledged their support for the bill to insure its adoption. Although some members of the committee were led to believe Mr. Reed was not antagonistic to the bill, he made no definite promise to support it. The bill was recommended by the Committee on Health and Hygiene to which it was referred and was given a place on the calendar, but as the end of the session approached other bills were advanced, leaving the basic science bill further and further behind until it finally died on the calendar.

A good many explanations and excuses were given. Naturally there had been very active opposition by the chiropractors and osteopaths and the most plausible explanation to be heard was to the effect that many of the legislators who were pledged to support the bill became alarmed at the opposition and asked that the bill be buried on the calendar. Ordinarily one would be justified in the conclusion that Governor Reed could not be held in any way responsible for that, but there seemed to be a current opinion, outside the legislature at least, that the Governor's organization was so complete and so efficient that all of the bills he favored and only those he favored were permitted to pass. Whether there was any foundation in fact for such an opinion is now of less importance than the

fact that it was accepted by many of the members of our profession as true and the Governor held responsible for the failure of the bill to come to a vote. At any rate there seems to be in the minds of many of our men an idea that the Governor could have secured the passage of our bill if he had cared to do so, and since he did not care to do so he should be considered as opposed to progress in scientific medicine. Whether these opinions are justified or not there has been no apparent effort on the part of the Govednor to change them and no evidence that he is in any way concerned about the attitude of the medical profession toward his candidacy for reelection.

For some reason, whether justifiable or not, the Governor's name is coupled with that of the Attorney General as being responsible for the indifference and inactivity in prosecuting the Brinkley case. It seems to be the prevailing opinion among members of the Society that a little show of interest by the Governor in this form of law enforcement might have encouraged more activity in the office of the Attorney General.

While there is no positive evidence that Governor Reed is hostile to medical progress, the indifference he has shown during his term as governor suggests that he would be of little value to us in furthering the purposes of scientific medicine.

We have no record of Mr. Haucke's past performances since the basic science bill failed to come to a vote, but he was reported to us as being in favor of it. It is understood that Judge Hamilton, attorney for our defense board, is one of his most active and influential supporters. It seems likely, therefore, that through Judge Hamilton's influence we can reasonably expect Mr. Haucke's cooperation in our efforts to better safeguard the health of the people. The opposition to Governor Reed seems to be very bitter and it is being predicted that if he is nominated his opponents will to a large extent support the Democratic nominee. With this possibility in mind we have also to consider the candidates for nomination by the Democratic party. Mr. Bowman offers us no encouragement. Two years ago we received the following report from the Anderson County member of our state wide campaign committee: "Bowman has been in the legislature twice and always supported the irregulars in everything they asked for and always opposed public health measures."

If then the contest should lie between Mr. Reed and Mr. Bowman in the final election it seems that our choice would have to be made between indifference and active opposition.

Up to this time we have no information as to Mr. Woodring's attitude toward our plans and purposes.

At the last annual meeting of the Society there was considerable criticism of the Attorney General for his inertia in the Brinkley matter and he will probably not have very many enthusiastic supporters among the doctors of the State in his candidacy for a position in the Supreme Court. Putting the most charitable constriction upon his apparent lack of interest in the Brinkley case, the least one can say is that he is not much impressed with the importance of enforcing the laws governing the practice of the healing art in this state. To the medical profession the enforcement of those laws enacted for the protection of the people against preventable diseases, and those laws enacted for the protection of the ill and afflicted against ignorant and unqualified practitioners of the healing art, are of even more importance than the enforcement of the prohibitory laws.

There is really nothing in the Attorney General's official record to commend him to the members of the medical profession for a position in the Supreme Court.

CHIPS

Under normal conditions ingested bacteria are destroyed in the small intestines. When such bacteria are found in the feces it is probable that the bactericidal power of the intestinal tract has been weakened. Arnold and Nedzel reported to the Chicago Pathological Society the results of some experiments to determine the factors involved, *Archives of Pathology,* April. They found that when their experiments were conducted in a warm temperature room the ingested bacteria were destroyed less readily and less completely. Any interference with the self disinfecting power of the small intestines would favor the development of typhoid carriers. Patients who have recovered from typhoid fever who show an absence of typhoid bacilli in the feces may have small lesions along the biliary tract that eliminate these bacteria into the duodenum where under normal conditions they are destroyed, but during the hot summer months this disinfecting power in the intestine is weakened and these bacilli pass on into the large intestine. Diarrheas caused by food poisoning and by polluted water interfere with the disinfection of the intestine and aid in spreading infection.

There has been some speculation as to the effect roentgen therapy in pregnant women may have upon the foetus. Goldstein recently reported some observations in such cases to the Philadelphia Pediatric Society, *American Journal of iseases of Children,* March, 1930. Histories were obtained of 107 women receiving either radium therapy or roentgen irradiation during gestation. Seventy-six children were born to these 107 women. Of these children 39 were unhealthy and 37 were healthy. In 10 of the 39 unhealthy children the causes of the existing disturbances or defects were attributed to other causes than the irradiation therapy. In the remaining 29 no other cause was found. Twenty-one of these exhibited mental or nervous disturbances and 8 presented other abnormalities of function or structure. In the group of 21 children with cerebral defects there were 17 with microcephaly. Since microcephaly occurs but once in about ten thousand births in the general population, the occurrence of seventeen cases in 87 births after post conception pelvic irradiation is suggestive at least.

Since several substances are now available for immunization against diphtheria, the report of Schwartz and Janney on the comparative value of these various agents, published in *The American Journal of Diseases of Children* in March, 1930, may be of some interest to the profession. The conclusions drawn from their studies are that among the agents so far used for immunization toxoid is superior to all others because it gives a greater percentage of immunes and because it does not cause serum sensitization. The Schick test is regarded as essential in any immunizing program. In a tabulation of their comparative study the per cent of immunes by toxoid is given as 98 while the next highest is 86, resulting from the use of the New York State Board of Health toxin-antitoxin.

In some studies concerning the factors involved in blood clotting Kugelmoss and his co-workers have suggested some points that may prove of considerable value. Their preliminary report, which appears in the March number of the *American Journal of Diseases of Children,* presents a method of determining tendencies to hemorrhage or to thrombosis. The proportionate amounts of the various factors involved in clotting are determined and from these the index of the clotting function of the blood is determined. It was found that the normal index is 0.5 plus or minus 0.2. Values above 1 indicate a marked tendency to clot while values below 0.2 indicate a marked tendency to bleed. Perhaps more important was the finding that both the tendency to hemorrhage and the tendency to thrombosis, in so far as the blood factors are concerned, may be largely controlled by diet. Illustrative

cases are cited in which such results seem to have been secured.

An interesting point was raised in a recent malpractice suit tried in England. A surgeon was sued on the claim that he had failed to remove a hemostat forcep which had been used in an operation eight years previously. Under ordinary circumstances the claim was outlawed after six years, but it was claimed that inasmuch as the forcep was not removed until two years previous to the action the statute of limitations did not begin to run until that time. No decision on the point was given, but the rial proceeded which suggests that the point was well taken.

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Proceedings of the Annual Meeting

(Concluded in this Issue)

MEETING OF HOUSE OF DELEGATES

Thursday, May 8th

The House of Delegates met in the Florentine Room, lobby floor, Hotel Jayhawk, Thursday, May 8th at 8:00 a. m. Meeting called to order by the president, Dr. E. S. Edgerton.

Roll call showed that there were 50 delegates present including the officers and councillors.

The following officers were elected:

President-elect, Dr. E. C. Duncan, Fredonia.

Vice President, Dr. J. B. Carter, Wilson.

Treasurer, Dr. Geo. M. Gray, Kansas City.

Delegates to American Medical Association:

Term 1 year, Dr. L. F. Barney, Kansas City.

Term 2 years, Dr. E. S. Edgerton, Wichita.

Term 3 years, Dr. J. F. Hassig, Kansas City.

Councillors:

First District, Dr. L. W. Shannon, Hiawatha.

Second District, Dr. L. B. Spake, Kansas City.

Seventh District, Dr. C. C. Stillman, Morganville.

Eighth District, Dr. Alfred O'Donnell, Ellsworth.

Ninth District (unexpired term), Dr. H. O. Hardesty, Jennings.

STANDING OF COUNCIL

Dist.	Councillor	Term Expires
First	Dr. L. W. Shannon, Hiawatha	1933
Second	Dr. L. B. Spake, Kansas City	1933
Third	Dr. P. S. Mitchell, Iola	1931
Fourth	Dr. O. P. Davis, Topeka	1932
Fifth	Dr. J. T. Axtell, Newton	1932
Sixth	Dr. J. F. Gsell, Wichita	1931
Seventh	Dr. C. C. Stillman, Morganville	1933
Eighth	Dr. Alfred O'Donnell, Ellsworth	1933
Ninth	Dr. H. O. Hardesty, Jennings	1932
Tenth	Dr. I. B. Parker, Hill City	1931
Eleventh	Dr. C. H. Ewing, Larned	1932
Twelfth	Dr. W. F. Fee, Meade	1931

The following resolution was presented by Dr. H. L. Chambers:

Whereas, The preparation for the practice of medicine is long, exacting, and expensive, and

Whereas, Experience has shown that money loaned to students under proper circumstances and safeguards is practically always repaid, and

Whereas, The Kansas Medical Society has some money that might be safely used in a revolving loan fund, therefore, be it resolved

1. That a commission of three be appointed by the president to consider the need for and advisability of such a fund,

2. To report its findings, arguments and conclusions to the annual meeting in 1931, and

3. If the idea is approved, to present a plan worked out in considerable detail under which it may be put in effective operation.

From the Douglas County Medical Society through its delegate, Dr. H. L. Chambers.

Dr. Chambers moved the adoption of the resolution, which was regularly seconded and carried.

The president, Dr. E. S. Edgerton appointed the following to serve on the committee and to report at the next annual meeting in 1931: Dr. Geo. M. Gray, Dr. L. G. Allen and Dr. H. L. Chambers.

Dr. Lewis G. Allen read the following resolution:

Whereas, It has recently become the practice for electrical and instrument dealers and manufacturers to rent or sell physio-therapy and light apparatus to the lay public without the prescription or advice of physicians, and

Whereas, It is a well known medical

fact that improper usage of any of the physio-therapy and light apparatus may have deleterious or injurious effects and results upon the users of the same, and

Whereas, The use of physio-therapy and light apparatus by lay patients without the prescription and advice of physicians encourages and corresponds to self-drugging and self-treatment, and deleterious consequences to the health of those so doing, therefore, be it

Resolved, By The House of Delegates of the Kansas Medical Society, in regular session that this society for the reasons above set forth, deprecates the renting or sale of the aforementioned physiotherapy and light apparatus to patients except when the same are prescribed and advised by physicians, and it is further

Resolved, That a copy of these resolutions be sent to the House of Delegates of the American Medical Association and that the delegates of this society to the American Medical Association be and are hereby directed and instructed to present and endeavor to secure the passage of similar resolutions to these at the meeting of the American Medical Association in Detroit in June, 1930. And it is further

Resolved, That a copy of these resolutions be published with the proceedings of this meeting in the Journal of the Kansas Medical Society, and sent, with a request for publication, to the Journal of the American Medical Association, American Journal of Physical Therapy, Chicago, and to such other publications as are deemed advisable by the secretary of this society.

Resolution adopted on motion by Dr. Allen, regularly seconded and carried.

The proposed amendments of the by-laws, which were presented at the last meeting of the House of Delegates, Tuesday night, May 6th were unanimously adopted as presented by Dr. W. E. McVey.

SECRETARY'S EXPENSE ACCOUNT

January 24 to May 5, 1930, and Salary

Stenographer's Salary	$ 300.00
Stamps	72.00
Long Dist. Telephone Calls and Telegrams	15.80
Miscellaneous	8.99
Secretary's Salary for past year— May 1, 1929 to May 1, 1930	1,000.00
Total	$1,396.79

The amount was allowed on motion by Dr. H. E. McCarthy, which was regularly seconded and carried.

Meeting adjourned.

JOINT MEETING OF COUNTY SECRETARIES AND COUNCIL

This meeting was held Tuesday, May 7, at 12:15 p. m., in the Green Room, second floor, Hotel Jayhawk. Dr. E. S. Edgerton was the presiding officer.

The following were present: W. F. Bernstorf, Pratt; Earle G. Brown, Topeka; H. L. Clarke, La Cygne; G. W. Davis, Ottawa; I. H. Dillon, Wellington; F. L. DePew, Howard; E. C. Duncan, Fredonia; H. E. Haskins, Kingman; T. E. Horner, Atchison; S. J. Schwaup, Osborne; H. A. West, Yates Center; J. T. Axtell, Newton; O. P. Davis, Topeka; E. S. Edgerton, Wichita; C. H. Ewing, Larned; J. F. Gsell, Wichita; Mr. J. D. M. Hamilton, Topeka; J. F. Hassig, Kansas City; W. E. McVey, Topeka; P. S. Mitchell, Iola; Alfred O'Donnell, Ellsworth; I. B. Parker, Hill City; C. W. Reynolds, Holton; L. B. Spake, Kansas City.

A complimentary luncheon was served, which has been the custom for several years. This was one of the best meetings of its kind that has ever been held by our society.

Interesting talks for the good of the state and county societies were made by the following: W. E. McVey, G. W. Davis; Earle G. Brown, W. F. Barnstorf, Mr. J. D. M. Hamilton, P. S. Mitchell, E. C. Duncan, O. P. Davis, C. C. Stillman, J T. Axtell, H. L. Clarke, I H. Dillon.

Meeting adjourned at 2:00 p. m.

COUNCIL MEETING

The newly organized council met May 8 at 10:15 a. m. in the Florentine Room, lobby floor of the Hotel Jayhawk. The meeting was called to order by the president, Dr. E. S. Edgerton.

The following members were present: Dr. C. W. Reynolds, Holton; Dr. L. B. Spake, Kansas City; Dr. P. S. Mitchell, Iola; Dr. O. P. Davis, Topeka; Dr. J. T. Axtell, Newton; Dr. J. F. Gsell, Wichita; Dr. C. C. Stillman, Morganville; Dr. Al-

fred O'Donnell, Ellsworth; Dr. I. B. Parker, Hill City; Dr. C. H. Ewing, Larned; Dr. W. F. Fee, Meade; Dr. E. S. Edgerton, Wichita; Dr. Geo. M. Gray, Kansas City; Dr. J. F. Hassig, Kansas City.

By a unanimous vote the meeting place for the 1931 annual meeting was decided to be held at Manhattan, a three day session, Tuesday, Wednesday and Thursday, May 5, 6 and 7, 1931.

On motion by Dr. Davis it was decided that Dr. Millis would be allowed to show his "jake" paralysis demonstration.

Dr. W. E. McVey, editor of the Journal, made the following report for the year:

ACCOUNT OF EDITOR JOURNAL WITH THE KANSAS MEDICAL SOCIETY
May 1, 1929, to May 1, 1930

Receipts		
Advertising	$4,858.49	
Sales and Subscriptions	280.67	
Kansas Medical Society	2,000.00	
Other sources	158.74	
		$7,297.90
Expenditures		
Printing Journal	$2,592.30	
Stock and Stationery	767.50	
Salaries and wages	2,520.00	
Postage	173.73	
Office rent	300.00	
Electrotypes	249.86	
Supplies for Committee on History	64.30	
Miscellaneous	52.11	
		$6,719.80
Balance on hand May 1, 1930		$ 578.10

I regret that my report shows a considerable reduction in advertising receipts, but for various reasons several pages of advertising contracts were not renewed this year. There are always ups and downs in the advertising business which follow very closely the waves of commercial and industrial prosperity, and considering the slump in other kinds of business we have not done so badly. Reckoned on a business basis the Journal has made a net profit of practically 20 per cent.

From the reports of paid-up membership so far received at the Journal office it is evident that we shall need to make a strenuous campaign for subscriptions. Two years ago we made an arrangement with the State Tuberculosis Association by which we received from them 100 paid subscriptions. Up to date 28 of those for whom subscriptions were paid by the association have become members of the society. So that this arrangement has not only enabled us to keep up our circulation but has brought twenty-eight members into the society and still acts as a feeder for the society. Some years ago solicitation of delinquent members brought us something over fifty subscriptions and many of these subscribers later renewed their membership in the society.

Of course I should like to make the Journal a more satisfactory business proposition for the society and shall exert every possible effort to do so, although it is now one of the least expensive of the state journals of approximately the same size and circulation.

But I should like more than that to make the Journal more attractive and more valuable to the members of the society. It has always been my ambition to produce a medical journal of which I myself might be proud, but it has also always been my misfortune to be poor and to find that manna from Heaven always fell in some other neighborhood. After twenty-eight years of effort with this and other medical publications I feel that I know something of what a journal of this kind ought to be.

It has seemed to be the consensus of opinion that the editors of state journals should not attempt editorial discussion of scienific subjects but should confine themselves to the discussion of the profession's economic affairs. If I suggest that this idea has occasioned a loss to the members of the society I trust you will understand that I am not assuming any superior talent for myself or other editors of state journals but simply calling attention to the fact that there is available to them a very large amount of current medical literature in the exchanges that come to their desks and from which they could prepare comprehensive reviews of the latest information on any medical subject. It means of course a very large amount of work, time for which only one can find who has an independent income or one whose salary is adequate for the maintenance of a fairly comfortable existence.

There is also the question if the mem-

bers of the society who presumably pay two dollars a year for the Journal are not entitled to receive all the Journal the amount of two dollars per capita can be made to produce, the value estimated in quality as well as size. This is a question, however, that has been delegated to you as members of the council to determine and I take it that your policy is one which best fits in with the size and financial status of the society. Whether by increasing the scope of influence of the Journal by making it more largely a disseminator of advanced medical knowledge as well as a forum for the exchange of professional opinions and experiences would justify the council in a change of policy or justify an editor in sacrificing his professional income to that end are not to be decided off hand.

The active practice of medicine and the efficient editorial management of even a medical journal are occupations that are incompatible. Each is subject to its emergencies but the emergencies of the former must always take precedence, even to the sacrific of the immediate needs of the latter. Nevertheless, the details of a publication of this kind must be taken care of as they arise for they are all and always in the nature of emergencies.

The editor who undertakes to develop a higher type of medical journalism on a part time basis must in the first place so arrange his business that there will be no uncertain and indefinite division of his time; and in the second place he should be permitted to realize upon any increment that may result from his increased effort as an encouragement to his energy if for no other reason.

If these suggestions appeal to you in any way I would further suggest that they be considered as a problem the solution of which is possible to a small society with limited resources. It is still my ambition that while I am permitted to serve you as editor I may be able to make of this Journal one that will not only be a credit to the Kansas Medical Society but also one of which I may myself be proud.

W. E. McVey, Editor.

Report accepted and filed on motion by Dr. P. S. Mitchell, regularly seconded and carried.

Dr. C. C. Stillman was elected to succeed Dr. C. S. Kenney on the Defense Board for a term of one year. Dr. W. F. Fee was elected for a term of three years.

Standing of Defense Board

Dr. C. C. Stillman, term expires 1931.
Dr. O. P. Davis, term expires 1932.
Dr. W. F. Fee, term expires 1933.

Dr. O. P. Davis made a motion that the Bureau of Public Relations be allowed to spend a sum not to exceed $2,000 for the ensuing year which was regularly seconded and carried.

Meeting adjourned at 11:30 a. m.

GENERAL SESSION

The scientific session convened at 9:30 a. m. in the Convention Hall of the Hotel Jayhawk, Topeka, Kansas, May 6, 1930, to listen to the previously announced subjects and the discussions thereof as presented by the members of the society.

PROGRAM

Tuesday, May 6

"President's Address"—Dr. E. S. Edgerton, Wichita.

"Necrology Report"—Dr. E. E. Liggett, Oswego. Was read by Dr. O. E. Stephenson.

"The Treatment and Management of Tetanus"—Dr. L. W. Shannon, Hiawatha.

Discussion opened by Dr. W. G. Emery, Hiawatha.

"The County Health Officer"—Dr. W. K. Johnson, Garnett.

Discussion opened by Dr. C. H. Kinnaman, Topeka.

"Impressions of Student Health Services"—Dr. Ralph C. Canuteson, Lawrence.

Discussion opened by Dr. Noble P. Sherwood, Lawrence.

"Gastric and Duodenal Ulcer"—Dr. L. O. Nordstrom, Salina.

Discussion opened by Dr. Alfred O'Donnell, Ellsworth.

"Stasis of Caecum and Ascending Colon"—Dr. L. D. Johnson, Chanute.

Discussion opened by Dr. P. S. Mitchell, Iola.

"Acute Intestinal Obstruction"—Dr. R. D. Russell, Dodge City.

Discussion opened by Dr. W. S. Grisell, Ransom.

"The Diagnosis of Acute Osteo-Myelitis"—Dr. E. E. Morrison, Great Bend.

Discussion opened by Dr. E. D. Ebright, Wichita.

"Mental Disturbances Associated with Puerperium"—Dr. Wm. C. Menninger, Topeka.

Discussion opened by Dr. M. L. Perry, Topeka.

Wednesday, May 7—Guest Day

"Fractures"—Dr. John R. Nilsson, Omaha.

Introduced by Dr. C. C. Stillman, Morganville.

"The Diagnosis and Treatment of Lesions of the Cranial Nerves"—Dr. Walter E. Dandy, Baltimore.

Introduced by Dr. C. C. Nesselrode, Kansas City.

"Repair of Injuries of Hand"—Dr. Allen B. Kanavel, Chicago.

Introduced by Dr. J. T. Axtell, Newton.

"Medical Ethics From a Modern Point of View"—Dr. Morris Fishbein, Chicago.

Introduced by Dr. F. A. Carmichael, Osawatomie.

"Problems of Cancer"—Dr. Joseph Colt Bloodgood, Baltimore.

Introduced by Dr. Earle G. Brown, Topeka.

Thursday, May 8

"Hemorrhoid Operation Under Local Anesthetic"—Dr. Claude C. Tucker, Wichita.

Discussion opened by Dr. A. P. Gearhart, Wichita.

"The Present Status of Women in Medicine"—Dr. Elvenor Ernest, Topeka.

Discussion opened by Dr. Maud DeLand, Topeka.

"Treatment of Bronchial Asthma"—Dr. Allen Olsen, Wichita.

Discussion opened by Dr. P. M. Krall, Kansas City.

"Diabetes"—Dr. B. P. Smith, Neodesha.

Discussion opened by Dr. P. M. Krall, Kansas City.

"Tuberculosis of Mesenteric Lymph Glands"—Dr. Milton B. Miller, Topeka.

Discussion opened by Dr. W. F. Bowen, Topeka.

"Radiation Treatment of Non-Malignant Lesions of Female Pelvis"—Dr. L. G. Allen, Kansas City, Kansas.

Discussion opened by Dr. J. A. H. Webb, Wichita.

"Peri-Tonsillar Infections"—Dr. L. B. Spake, Kansas City.

Discussion opened by Dr. F. C. Boggs, Topeka.

"Jake Paralysis Clinic"—Dr. J. P. Kaster and Dr. M. L. Perry, Topeka.

"Blood Sedimentation Test in Obstetrics and Gynecology"—Dr. L. A. Calkins, University of Kansas School of Medicine, Rosedale.

"Hip Joint Disease"—Dr. W. F. Schroeder, Newton.

Discussion opened by Dr. R. S. Haury, Newton.

"The Surgical Female Abdomen"—Dr. L. V. Dawson, Ottawa.

Discussion opened by Dr. H. M. Glover, Newton.

Dr. C. C. Stillman made a motion which was regularly seconded and unanimously carried that a vote of thanks be extended to Drs. Kaster and Perry for the interesting "Jake" Clinic, which they presented.

The registration was 511, which was the largest in the history of the society. There was a big attendance at each session and the attention at all times was unusually good. Every essayist on the program was present. Taking everything into consideration, this was the best annual meeting the society has ever held, and much of the credit is due to the excellent work of the local committee on arrangements.

J. F. Hassig, Secretary.

COMMITTEE ON SCIENTIFIC WORK

Program submitted as report of Scientific Committee.

Accepted by motion of Dr. Geo. M. Gray, regularly seconded and carried.

The following proposed amendment to the Constitution which was presented to

the Council at its annual meeting in January and published twice in the Journal of the society:

Resolved, That Section 1 of Article X of the Constitution be amended to read as folows:

Article X

Section 1. The term of office of the president shall be for one year and shall begin on the first day of January following his election. The term of office of the president-elect shall be from the date of his election until the first day of January following. The terms of office of the vice president and the treasurer shall be for one year. The terms of office of the secretary and of the councillors shall be for three years. All of these officers shall serve until their successors are elected and installed.

Moved by Dr. O. P. Davis that that amendment be adopted and regularly seconded and carried unanimously.

The following resolutions pertaining to the by-laws were presented by Dr. W. E. McVey:

Resolved, That Section 1 of Chapter III of the by-laws be amended by striking out the words "one of" and changing vice presidents to read vice president in the second sentence of said section.

Resolved, That Section 9 of Chapter IV be amended by striking out all of the last sentence of said section.

Resolved, That Section 2 of Chapter VI be amended by striking out the words "one of" and changing vice presidents to read vice president, in the last sentence of said section.

Resolved, That Chapter IX of the by-laws be amended to read as follows:

CHAPTER IX—COMMITTEES

Section 1. The standing committees shall be as follows:

A committee on scientific work
A committee on public policy and legislation
A committee on public health and education
A committee on Medical School.
A committee on Stormont Medical Library
A committee on necrology
A committee on history
A committee on arrangements
The Bureau of Public Relations
The Executive Committee of the Council
Committee on Hospital Survey.

These committees shall be appointed by the president except as hereinafter otherwise provided; and the members thereof shall serve for one year or until their successors are appointed except as hereinafter otherwise provided.

Section 2. The committee on scientific work shall consist of three members, of which the secretary shall be one, and shall determine the character and scope of the scientific proceedings of the society for each session, subject to the instructions of the House of Delegates. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

Section 3. The committee on public policy and legislation shall consist of three members and the president and secretary. Under the direction of the House of Delegates it shall represent the society in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Section 4. The committee on public health and education shall be composed of five members and shall work under the direction of this society and its council to spread among the lay public a knowledge of preventive medicine and especially a knowledge of cancer and the importance of an early diagnosis. It shall, in so far as possible, work in conjunction with the committee of the American Medical Association of like name.

Section 5. The committee on Medical School shall be composed of five members. It shall be the duty of this committee to secure the data available con-

cerning the activities, progress and needs of the University of Kansas School of Medicine and make an annual report of the same to this society; it shall also endeavor to establish and maintain a close relationship between the said school of medicine and this society.

Section 6. The committee on Stormont Medical Library shall be composed of three members at least one of whom shall be a resident of Topeka. It shall be the duty of this committee to formulate and recommend to the state librarian, rules for the use of, and lists for the purchase of medical books, charts and magazines for the Stormont Medical Library, at such time as accumulated funds may justify, in accordance with the provisions of Section 75-2525 and Section 75-2529 of the revised statutes of Kansas.

Section 7. The committee on necrology shall be composed of three members whose duty it shall be to collect all available data concerning those members of the society and other physicians who have died in this state during the year and make a report at the annual meeting of the society.

Section 8. The committee on history shall be composed of three members whose appointment shall be permanent; provided that vacancies occasioned by death, resignation or removal may be filled by the president. It shall be the duty of this committee to collect, preserve and compile all available data concerning the history of this society and the history of medicine in Kansas, and to make annual reports of their findings to the society.

Section 9. The committee on arrangements shall be appointed by the component society of the county in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the society, of the council and of the house of delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Section 10. Bureau of Public Relations. The president, secretary and treasurer of the society, the chairman of the Defense Board, the chairman of the Committee on Public Policy and Legislation, the chairman of the Committee on Public Health and Education, the chairman of the Committee on Medical School and the editor of the Journal shall constitute the Bureau of Public Relations, whose duty it shall be to co-ordinate the functions of the various committees and departments represented in the bureau in carrying out the purposes of the society. If and when deemed expedient the Bureau of Public Relations shall appoint a secretary who shall, under the directions of the members of the bureau, conduct such publicity campaigns as may further the purposes of the society, assist in securing desirable legislation and in the prosecution of violators of the laws now on the statute books governing the practice of the healing art, and perform such other duties as may be directed by the society.

Section 11. The Executive Committee of the Council shall be composed of the president, secretary and treasurer of the society, who are ex-officio members of the council, and the chairman of the Defense Board. This committee shall have authority to act in the interim between regular meetings of the council upon all matters which would ordinarily require called or special meetings of the council.

Section 12. The Committee on Hospital Survey shall be composed of three members appointed by the president. It shall be the duty of this committee to make surveys of the hospitals of the state and co-operate in this and other ways with the committee of the same name of the American Medical Association.

The above amendment was layed over to the next meeting of the House of Delegates for final consideration.

The folowing resolutions were presented by Dr. Earle G. Brown:

RESOLUTION ON ORGANIZATION OF FULL-TIME COUNTY HEALTH DEPARTMENTS

Whereas, Adequate public health administration is the duty of official government agencies, and

Whereas, The experience of many states has shown that the full-time county health department is the ideal unit for efficient public health protection, and

Whereas, In recent years the state board of health in co-operation with county boards of health and voluntary health agencies have organized full-time county health departments in several counties of the state and have demonstrated the value of this unit in the promotion and protection of the public health of the communities served,

Therefore, Be it Resolved, That the Kansas Medical Society approves the principles of the full-time county health department and recommend the establishment of these units as the most efficient and economical means of health protection.

RESOLUTION ON TOXIN ANTITOXIN

Whereas, at the 69th annual meeting of the Kansas Medical Society unanimous approval was given the use of toxin antitoxin as a preventive against diphtheria, and

Whereas, through county medical societies, city and county boards of health, in co-operation with the state board of health, more than 300,000 children in Kansas have been protected against diphtheria, and

Whereas, The value of toxin antitoxin as a preventive against diphtheria has been fully demonstrated,

Therefore, Be it Resolved, That the Kansas Medical Society heartily commend the efforts of the various county medical societies, the city and county boards of health and the state board of health in their efforts to eradicate diphtheria from the state, and

Be it Further Resolved, That the Kansas Medical Society recommends that all ethical measures be used in extending toxin antitoxin to all children in the state who have not received this preventive treatment.

Whereas, The state board of health will supply to individual physicians, printed statements relative to the prevention of the three major preventable diseases, namely diphtheria, smallpox and typhoid fever, and

Whereas, These statements will be supplied without charge to all physicians who request same.

Therefore, Be it Resolved, That the Kansas Medical Society endorse the use of these printed statements and urge members of the society to use same in correspondence with their clientele.

A motion was made by Dr. W. S. Lindsay that a committee of three be appointed by the president to draw up suitable resolutions and forward to the Kansas City Star expressing the appreciation of the Kansas Medical Society for the wonderful work of their special representative, Mr. A. B. MacDonald in the Brinkley matter.

Motion regularly seconded and carried unanimously.

Dr. Edgerton, president, appointed the following committee: Dr. O. P. Davis, Dr. W. S. Lindsay and Dr. W. F. Fee.

Dr. P. S. Mitchell presented a motion that the executive committee have full power to act in all cases of undesirable practitioners.

Motion regularly seconded and carried unanimously.

On motion by Dr. C. C. Stillman, meeting adjourned at 10:30 p. m.

SOCIETIES

RUSH-NESS COUNTY SOCIETY

The Rush-Ness Couny Society met at Dr. Grisell's hospital at Ransom, Kansas, June 18, 1930, with Dr. W. Singleton presiding. There were eight doctors present and a guest, Mr. Henry Erni of Bison, Kansas, who is a medical student at Kansas University.

A number of communications were read and the regular business of the society taken care of. There was some discussion as to the holding of a public meeting this fall, but the matter was carried over for further discussion and the working out of details.

Dr. N. W. Robinson read a paper on "Hypertension," Dr. Singleton one on "A Phase of the High Cost of Illness," and Dr. Attwood, one on "Diabetes Mellitus," all of the papers were discussed in round table by each member present. Our society being small we find this a very effective way of maintaining the

active interest of our members.

Following the meeting a very delicious luncheon was provided by Dr. Grisell and served to us by the nurses of the hospital.

The Society will be guests of Dr. Blount at Burdett for the September meeting.

F. D. SMITH, M.D., Secretary.

WILSON COUNTY SOCIETY

The Wilson County Medical Society held their annual banquet at six p. m. Tuesday, June 3, at the Methodist Church at Fredonia. The doctors brought their wives and invited a number of outside guests. The meeting was called at this particular time in honor of Colonel George A. Skinner and Mrs. Skinner of Omaha, Neb. Colonel Skinner was making a trip through Oklahoma, Kansas, and Missouri and had arranged to talk to us that date. Doctor C. H. Dewey, president of the local society, acted as toast master and after calling upon the various members and guests for two minute talks, introduced Doctor E. C. Duncan who in turn introduced the speaker of the evening, Colonel Skinner, who spoke for forty-five minutes in a most entertaining manner. For thirty-five minutes his subject was reminiscences of the old army and the last ten minutes was devoted to a statement of the necessity for reasonable national preparedness.

A number of dentists were invited and among the guests present were: Doctor and Mrs. Paul E. Whiffen; Doctor and Mrs. H. J. Davies; Doctor Roy M. Matthews; Mr. and Mrs. Miles E. Canty; Mary Agnes Wiley, and Miss Josephine Sheedy of Fredonia; Mr. and Mrs. Paul E. Pinkston, Elk City; Doctors J. B. Blades and C. O. Shepard, Independence; Doctor and Mrs. Moody and Doctor Bauerfield, of Neodesha; and Miss Hyde of Buffalo. The members present were: Doctor C. H. Dewey, of Buffalo; Doctor and Mrs. B. R. Riley, of Benedict; Doctor George W. Farrar, of Fall River; Doctor and Mrs. W. H. Addington of Altoona; Doctor and Mrs. J. W. McGuire; Doctor and Mrs. O. D. Sharpe, and Doctor and Mrs. P. B. Smith, of Neodesha. From Fredonia Doctor W. H. Young; Doctor F. M. Wiley; Doctor and Mrs. A. C. Flack, and Doctor and Mrs. E. C. Duncan.

NOTES PICKED UP BY THE REPORTER

Colonel and Mrs. Skinner were guests of Doctor and Mrs. E. C. Duncan while in Fredonia.

It is rumored Doctor C. H. Dewey is soon to be married.

Doctor W. H. Young and Miss Josephine Sheedy of Fredonia were married in Fredonia June 3 and left for a two weeks' wedding trip.

Doctor E. C. Duncan and wife leave for Fort Snelling, Minn., early in July. Doctor Duncan is commanding officer of the 314th medical regiment which trains there.

Doctor Addington, although seventy-six years old, never misses a meeting of the society.

Doctor and Mrs. A. C. Flack leave in July for an extended motor trip.

E. C. DUNCAN, Secretary.

FRANKLIN COUNTY SOCIETY

The Franklin County Medical Society held its regular June session at the Kansas State Hospital, Osawatomie, dinner guests of Dr. F. A. Carmichael, superintendent of that institution, who is a member of our Society.

The program of the evening was led by Dr. M. J. Owens of Kansas City.

The subject was "The Significance of Pain in the Abdomen and its Evaluation in Diagnosis. Procedure and Prognosis."

Dr. Owens very kindly forwent the opportunity to present a long technical paper, but, instead, talked from the shoulder, giving us a practical talk on this very important subject.

"See your patient, look for signs, consider history, remote and immediate, see if the patient is profoundly ill." This was the key note sounded by the speaker.

If our society had ever expected that in Dr. Owens we might hope for a "Joshua" to succeed our departing "Moses" of the radio we were disappointed.

"Regard pain in the abdomen with such serious consideration that you may never prescribe medicines or therapeutic measures without seeing your patient."

In severe pain in epigastrium, look for three things, acute hemorrhagic pancreatitis, cholecystitis and perforations. Also coronary thrombosis being non-surgical and very fatal, interests the practitioner from the standpoint of prognosis.

The cardinal symptom of coronary sclerosis being shortness of breath aids the observer to differentiate for the family in time to give them some warning of the impending collapse.

Cyanosis should be regarded as pathognomonic of coronary thrombosis, and seldom if ever seen in other painful lesions of upper abdomen, barring possibly acute pleuropneumonia.

When seeing patient in great abdominal pain, get all the history you can. Consider decubitus, expression of face, character of respiration, pulse and temperature. Look to see if the patient is sick.

When possible get patient into proximity of surgical arrangements. When called to a patient suffering acute pain in the abdomen, look for scar. Stone from kidney, intussusception in youths, strangulated hernia, pedicle twist and ruptured ectopic may occur in abdomen from which appendix has been removed. Ruptured tubal pregnancy carries with it almost invariably its own signs—shock.

Dwelling somewhat at length, and reciting some past experiences, the speaker set out some, to most of us, rather revolutionary procedures, viz., that in surgery of the abdomen for the relief of ruptured ectopics, little effort, if any, should be made to remove extravisated blood. In his own cases he left it in the abdomen when he removed the detritus, and believes that convalescense is more certain and less eventful, by so doing.

Take a little more time in coming to conclusions where there is no scar and the pain is in the right lower quadrant. An appendicitis may safely go 24 hours, but perforation of the intestine, duodenum or rupture of gall bladder, better have immediate surgery.

Dr. Owens gave us a lecture, carrying his audience's interest along for more than an hour. He cited cases and case histories to illustrate the many practical points he desired to drive home.

Dr. F. A. Carmichael opened the discussion which was joined by many members present.

Dr. S. D. E. Woods, complimented the speaker on his lecture, stressing the thought in the minds of most men present, that a plain talk out of the experiences of the speaker was preferable to paper or formal essay, which in the very nature of it could be burdened with statistics.

The secretary notes with pleasure the tendency of medical speakers, generally to feature things that come near to the hearts of the general practitioner.

The next regular meeting of the society will be held at the Ottawa Country Club, Wednesday, July 30.

The program will be two papers by outside men. Puzzling problems in Infant Feeding by Dr. Gilke, and Acute Idiopathetic Fever in Children, by Dr. Dwyer, both of Kansas City.

These will be followed by a 4-reel medical picture. At this meeting the Douglas, Anderson, Allen, Lyon, Osage, Coffey, Shawnee, Leavenworth and Miami County Societies will fraternize with our group.

The program of the day will open with an 18-hole and a 9-hole golf dinner match. Special effort will be made to match up some "three-somes" of lady players. The price of the dinner will be 85 cents, and players will be listed in three columns, according to handicaps, the winning column to get free suppers and the two losing columns to pay for a dinner and a half. Dr. L. V. Dawson will have charge of the medical golf tournament. Dinner will be served at 6:45 p. m.

It is hoped that the doctors and their wives of the counties bordering on Franklin will take a half day holiday and come and play in our back yard.

GEORGE W. DAVIS, Secretary.

DEATHS

Milton S. McGrew, Holton, Kansas, aged 63, died May 9, 1930, of cerebral embolism. He graduated from the Hahnemann Medical College, Chicago, in 1891. He was a member of the Society.

JUST TO REMIND YOU

If you change your address or if the Journal is not delivered to you regularly please send a card directed to The Journal of the Kansas Medical Society, 700 Kansas Avenue, Topeka, Kansas.

If you are threatened with a suit or a suit has been brought against you for malpractice, write to Dr. O. P. Davis, Chairman of Defense Board, 917 North Kansas Ave., Topeka, Kansas.

If you want to buy instruments, office supplies or equipment, drugs or chemicals, books, or anything else, look through the advertisements in the Journal and if you don't find what you want write the Journal office and an effort will be made to find it for you.

If you have neglected to pay your dues for 1930, write the secretary of your county society and send a check for the proper amount to him.

If you move from the county in which you hold membership into another county in which there is a county society you should present your card to the secretary of that county society and send a notice of your removal to the secretary of the State Society, Dr. J. F. Hassig, 804 Huron Building, Kansas City, Kansas.

Selection of Drugs in Hospitals

The hospital should afford unusual opportunities for enhancing rational drug therapy. There particularly may products be submitted to critical inspection. As Sollmann so pointedly remarked at the recent Congress on Medical Education, the "evaluation of therapeutic remedies is not usually among the features to which hospital authorities point with just pride of achievement." The hospital drug room, which reflects directly the medicinal requests of the staff, has hardly kept pace with the modernization of other departments of the hospital. As for proprietary medicines, the shelves often remind us of what Irons aptly terms the "chain drug-soda-fountain-lunchroom." While in most medical schools the student receives good courses in pharmacology, materia medica and therapeutics and is made familiar with new and nonofficial remedies, it is unfortunately true that when the student becomes an intern in a hospital he finds not unfrequently that irrational prescriptions are written by the "chief" of a service, who has not kept apace with the trend of modern drug therapy. All too often he prescribes proprietary drugs when the same drug is obtainable under the pharmacopeial name at a much lower cost. To mitigate the evils of the prescribing of proprietaries, Irons has suggested the issuance of a hospital manual which shall contain hospital rules and a formulary. The Council on Medical Education with the co-operation of the Council on Pharmacy and Chemistry is following up the suggestion and considering the preparation of such a manual. (J.A.M.A., May 31, '30.)

FOR SALE OR TRADE—Will sell for cash or trade with some doctor in Central or Eastern Kansas a good seven or eight thousand dollar practice. If interested write to Box 728, Herndon, Kansas.

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CHARTERED BY THE TERRITORIAL LEGISLATURE OF KANSAS, FEBRUARY 19, 1859

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Secretary—J. F. HASSIG, M.D., Kansas City **Treasurer—GEO M. GRAY, M.D., Kansas City**

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Members of the Component County Societies are members of the Kansas Medical Society. Physicians residing in counties where no County Society exists may join the society of an adjoining county. Physicians residing where no County Society exists, who are members of a district or other independent society approved by the Council, may be admitted to membership.

ANNUAL DUES due on or before February 1st of each year.

Dues should be paid to the Secretary of the Component County Society, or, if not a member of a County Society, to the Secretary of the Kansas Medical Society.

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Contains No Sugar

WINTER SALAD (*Six Servings*)

	Grams	Prot.	Fat	Carb.	Cal.
2 teaspoons Knox Sparkling Gelatine	4.5	4	...	...	...
¼ cup cold water	...	...	...	...	...
¼ cup hot water	...	...	...	...	...
¼ teaspoon salt	...	...	...	...	...
¼ cup vinegar	...	...	...	...	...
1½ cups grated cheese	150	43	54	...	...
½ cup chopped stuffed olives	70	1	19	8	...
½ cup chopped celery	60	1	...	2	...
½ cup chopped green pepper	25	...	...	1	...
½ cup cream, whipped	75	2	30	2	...
Total		51	103	13	1183
One serving		8.5	17	2	197

Soak gelatine in cold water. Bring water and salt to boil and dissolve gelatine in it. Add vinegar and set aside to chill. When nearly set, beat until frothy, fold in cheese, olives, celery, pepper and whipped cream. Turn into molds and chill until firm. Unmold on lettuce leaf and serve.

SPINACH SALAD (*Six Servings*)

	Grams	Prot.	Fat	Carb.	Cal.
1½ tablespoons Knox Sparkling Gelatine	10	9	...	...	...
¼ cup cold water	...	...	...	...	...
1¼ cups boiling water	...	...	...	...	...
2 tablespoons lemon juice	20	...	...	2	...
¼ teaspoon salt	...	...	...	...	...
1½ cups cooked spinach, chopped	300	6	...	7	...
2 hard cooked eggs	100	13	10.5	...	...
Total		28	10.5	9	242.5
One serving		5	2	1.5	40

Soak gelatine in cold water and dissolve in boiling water. Add lemon juice, salt, strain and chill. When nearly set, stir in chopped spinach, mold and chill until firm. Serve on lettuce hearts or tender chicory leaves and garnish with hard cooked egg, cut lengthwise in sixths and sprinkled with paprika. Serve with mayonnaise.

If you agree that recipes like the ones on this page will be helpful in your diabetic practice, write for our complete Diabetic Recipe Book—it contains dozens of valuable recommendations. We shall be glad to mail you as many copies as you desire. Knox Gelatine Laboratories, 423 Knox Ave., Johnstown, N. Y.

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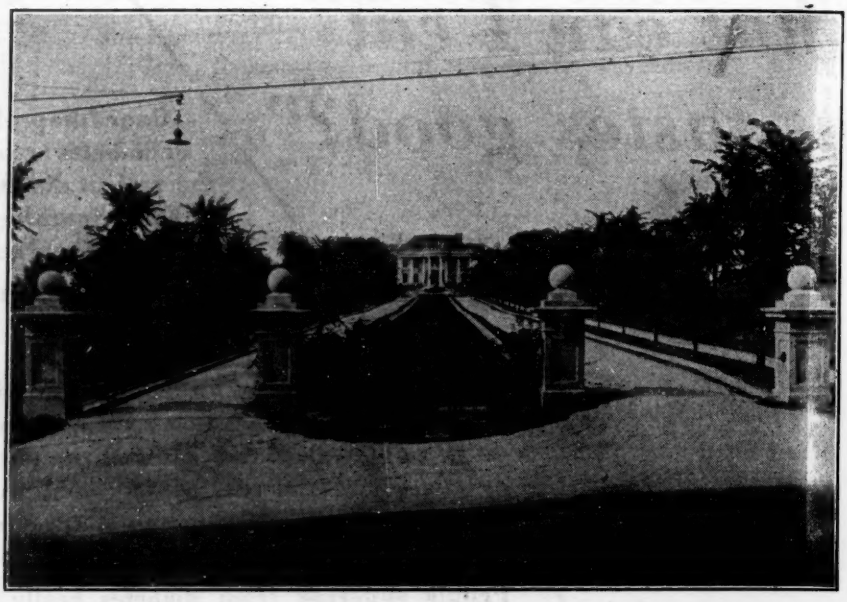

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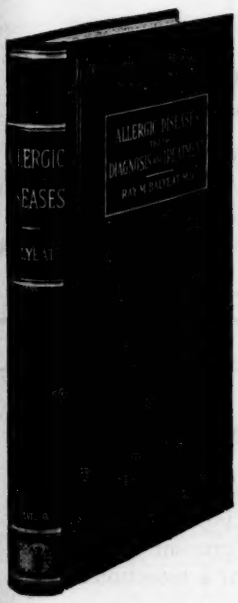
By

RAY M. BALYEAT, M.A., M.D., F.A.C.P.



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